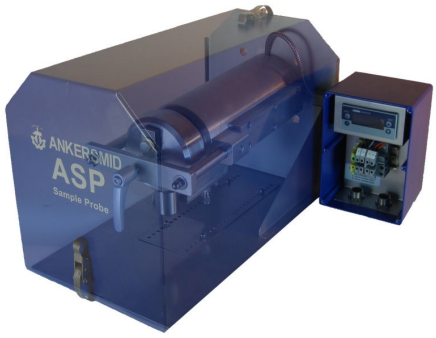
Stationary Gas Sample Probe Series ASP

Version ASP 300, ASP 400, ASP 500 Heated



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 3 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 (e.g. 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 3 different lengths of heated filter body, a filter element of 150mm length, suitable for most applications up to 1g dust/m³ can be integrated. 200mm filters are used for applications up to 4g dust/m³; with the optional blow-back function dust loads of up to 10g/m³ can be handled.
The 500mm model filter 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.
The big advantage is that all filters **are replaceable without dismounting the probe.** The benefit is that all filters can be replaced without any tools and in the shortest possible time.
The cleaning and exchanging of unheated sample tubes or the preliminary top-filters can be affected by extracting the filter from the probe.
The probe temperature is controlled by a microprocessor based PID-controller. Alarm or fault contacts can be programmed and the temperature can be changed only by user-code. The standard sensor is PT100, whereas Fe-CuNi is standard for the high temperature version.
We offer the option of 2-way Modbus/RS485 communication that combines **all** Ankersmid controllers, so that digital communication with the control room is possible.
The following features are offered in all 3 lengths of probes:

- Calibration gas can be injected into the probe through a check valve directly to the sample outlet. No calibration gas is lost into the stack.
- An isolation valve with pneumatic control shuts off the sample outlet from the internal filter area in case of blow-back.
- Through a high flow **back-flush** inlet we can clean the filter and the inlet sample tube so less maintenance is necessary in high dust load applications. This inlet can be controlled by a pneumatic or electric valve, and also in combination with a volume chamber for high pressure flow.

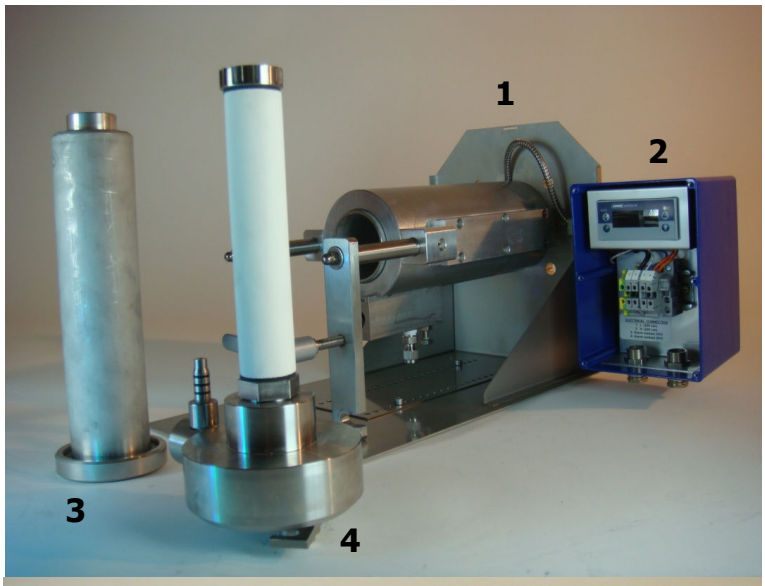
- **Retractable inner probe body for easy changement of pre-filter and/or (unheated) sample tube without dismounting the probe**
- **Optional back-flush possibility and closing the sample gas outlet. Also as retro fit set.**
- **Very universal applicability**
- **Compact and modular design suited for most applications**
- **No optional support for heated sample line needed (bottom plate prepared with pre-lasered cut-outs for M40-gland connection)**
- **Reduce operator exposure to safety risks**
- **Easy mounting**
- **Easy maintenance**
- **Digital communication**
- **Patented construction**

Technical data

Version	ASP 30X	ASP 40X	ASP 50X
Integrated filter Length	**150mm**	**200mm**	**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 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	480cm³	760cm³
Filter element, porosity	Ceramic, 2µm	stainless steel 316, 2µm	stainless steel 316, 2µm
Thermostatic Control	0-180°C Pt 100 Option 0-320°C Fe-CuNi		
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/1200W 115VAC/1200W	230VAC/1500W 115VAC/1500W
	320°C		
	230VAC/ 1100W 115VAC/ 1100W	230VAC/1500W 115VAC/1500W	230VAC/1800W 115VAC/1800W
Electrical connections	Terminals max. 4mm², 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 536mm	430 x 264 x 636mm
Weight	16 kg	19 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 2µ, 200mm	0,005	0,010	0,018	0,030	0,050	bar
ΔP with new filter element 2µ, 500mm	0,002	0,004	0,010	0,015	0,025	bar

Pictures

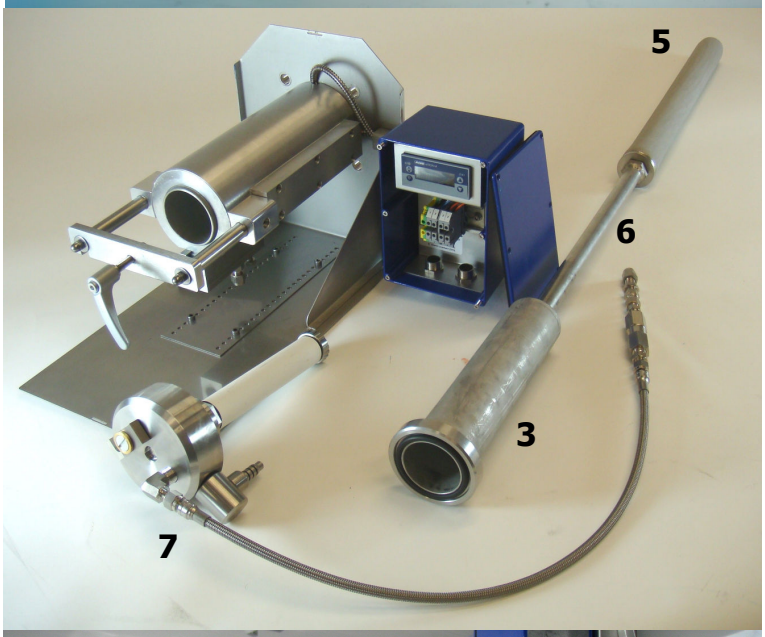


1 - Sample Probe type ASP 300

2 - Junction box with digital temperature controller

3 - Retractable inner probe body (SS316)

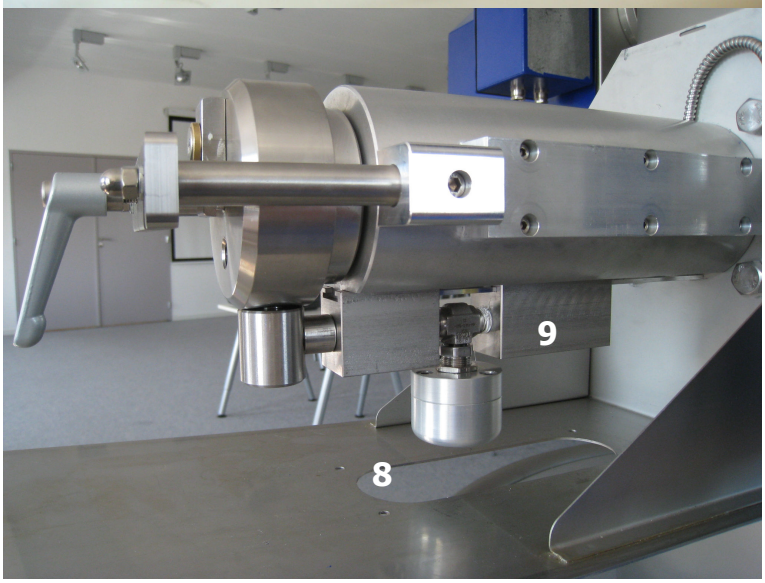
4 - Probe lid with mounted external filter element type AUF 015 (150mm, 2µm, ceramics)



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

Technical drawing