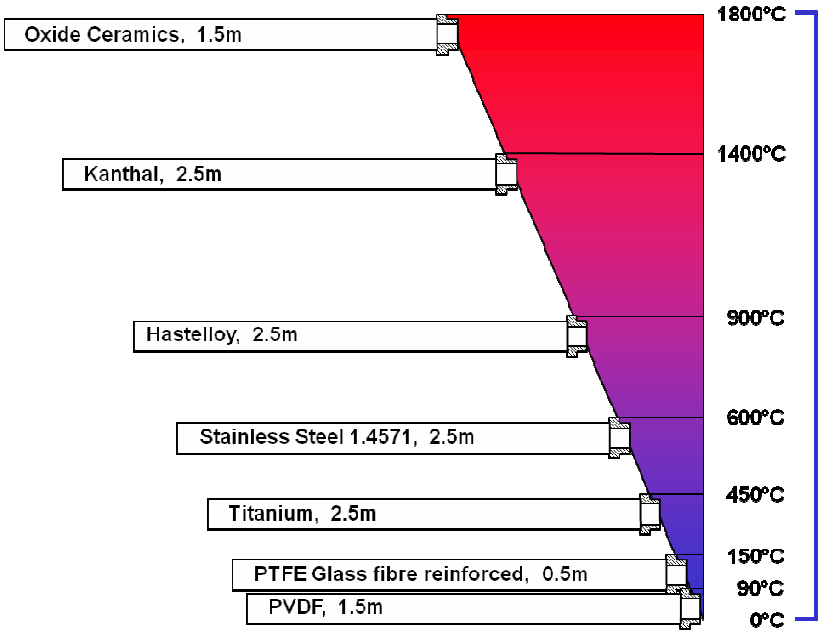
Sample Tubes AST
for sample probes series ASP

Application

These sample tubes are used in combination with the **Ankersmid ASP** probes in order to sample the gas in the optimal section of the gas-stream. For a typical installation of the probe-tip, a position in the middle third of the gas stream is advised.
For dust concentrations higher than 2g/m³, we advise fitting a pre-filter in combination with an extension tube.

Description
Different solutions for different applications:



- **Used for dust loading up to 2g/m3**
- **Sampling after wet scrubber up to 90°C**
- **Sampling gases up to max. 1400°C**
- **Different materials**
- **Available in lengths up to 2500mm, others in request**

Maximum sample tube temperature is depending on the horizontal length inside this temperature zone.

Application	Tube type	Max. T [°C]	Material	Connection	Outer diameter
After wet scrubber or high dew point	ADT 080 (Demistor tube)	90°C	PTFE	G ¾"o	40-70
Temp < 150°C	AST 411-412- 413	150°C	PTFE	G ¾"o	22
Temp < 600°C	AST 051- 404	600°C	SS316	G ¾"o	22
Temp < 900°C	AST 431-432-433-434	900°C	Hastelloy C®	G ¾"o	22
Temp < 1400°C	AST 435	1400°C	Kanthal®	G ¾"o	20
HCl or high corrosive gas	AST 421-422-423-424	450°C	Titanium	G ¾"o	22

Electrically heated sample tube

AST 05x, AST 10x, AST 15x, AST 20x

Application

The electrically heated **Ankersmid** sample probe tube **AST 05x-10x-15x-20x** are used in extractive sampling systems to avoid cooling and condensation of the sample.
Condensation, in combination with a high dust load, can result in blockage of the probe. This is to be strictly avoided as sample gases may be absorbed into the condensate after cooling and will be undetectable. An extra stainless filter can be mounted on top of the tube in case of very high dust levels (> 10 g/m³).

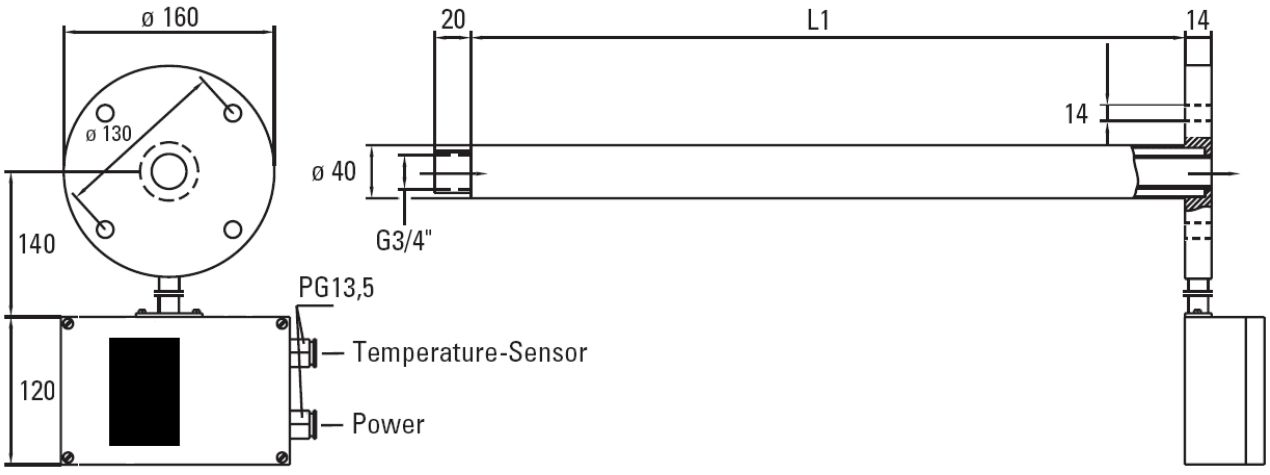
Description

This electrically heated sample tube is available in 4 standard lengths:
0.5, 1, 1.5 and 2.0 meter (other lengths on request).
As for all Ankersmid probes, the standard flange is a DN65 PN6. Adapter flanges for most common process connections can be provided if required.
If needed, it is possible to affix a non-heating sample probe or pre-filter to the tip of the heated tube.
Inside the sample tube a thermocouple type J (Fe-CuNi) is integrated. As a standard it is installed in combination with the digital controller, the user has a freely programmable set point and alarm.

Optional available is a 2-way Modbus/ RS485 communication that combines signals from all installed Ankersmid controllers, so that digital communication with the control room is possible.

- **Different lengths available**
- **Completely heated sample tube**
- **Digital controller**
- **Easy mounting**
- **Optional: Modbus/RS485**

Dimensions



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Technical data

Series AST Type	AST05x	AST10x	AST15x	AST20x
Temperature sensor & controller (additional part number)				
AST 001	Incorporated capillary temperature controller			
AST 002	Temperature sensor thermo-couple type J (Fe-CuNi)			
AST 003	Temperature sensor thermo-couple type K (NiCr-Ni)			
AST 004	Temperature sensor thermo-couple type J (Fe-CuNi), including integrated electronic controller with high/low alarm			
AST 005	Temperature sensor thermo-couple type K (NiCr-Ni), including integrated electronic controller with high/low alarm			
RS 485 / Modbus interface	Optional			
Probe tube length L1	500mm	1000mm	1500mm	2000mm
Sample temperature max.	500°C	500°C	450°C	400°C
Operating temperature max. (pre-adjusted at 180°C)	200°C	200°C	200°C	200°C
Pre-filter	Optional			
Sample gas inlet connection	G3/4"i			
Dust loading	max. 2 g/m3			
Probe tube volume	200ml/m			
Sample pressure max.	5 bar g			
Ambient temperature	-20°C to +70°C			
Storage temperature	-30°C to +70°C			
Ready for operation	Approx. 0,5h			
Power supply	230VAC, 500W 115VAC, 500W	230VAC, 800W 115VAC, 800W	230VAC, 1200W 115VAC, 1200W	230VAC, 1500W 115VAC, 1500W
Electrical connection	2 x 2.5mm² + 2.5mm²			
Electrical standard	EN 61010, EN60519-1			
Degree of protection	IP54 EN 60529			
Mounting flange	DN65 PN6			
Material of gas wetted parts	Stainless steel 316			