

## JES 301E1 Gas Sampling Probe



### APPLICATION

- For continuous gas sampling in processes with dust and humidity
- Ex-version Zone 1 or 2
- Removing aerosols and dust from gas sample
- Extractive gas analysis
- Emission monitoring and process monitoring
- For outdoor and indoor use

### BENEFITS

- Convenient filter replacement
- Rapid availability
- Low maintenance operation

### FEATURES

- Filter replacement without tools
- Large filter surface
- Filtration from outside to inside
- Calibration gas port (option)
- Backpurge port (option)
- Heated sample hose is connected directly to heated sampling probe
- Weather protection housing
- For high dust concentrations
- Self-limited Ex-heater
- No temperature controller needed
- Wide range of accessories



# JCT

Analysentechnik  
GmbH

Gas Sampling Probes

Heated Sample  
Lines

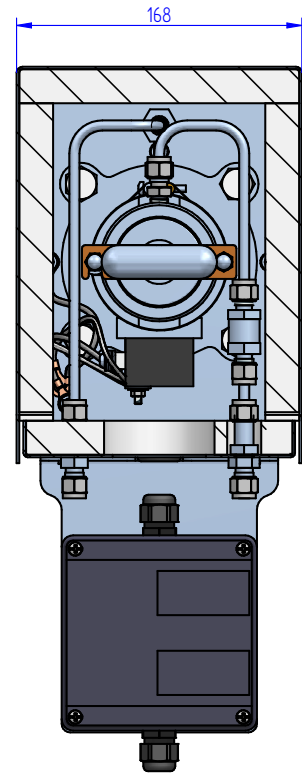
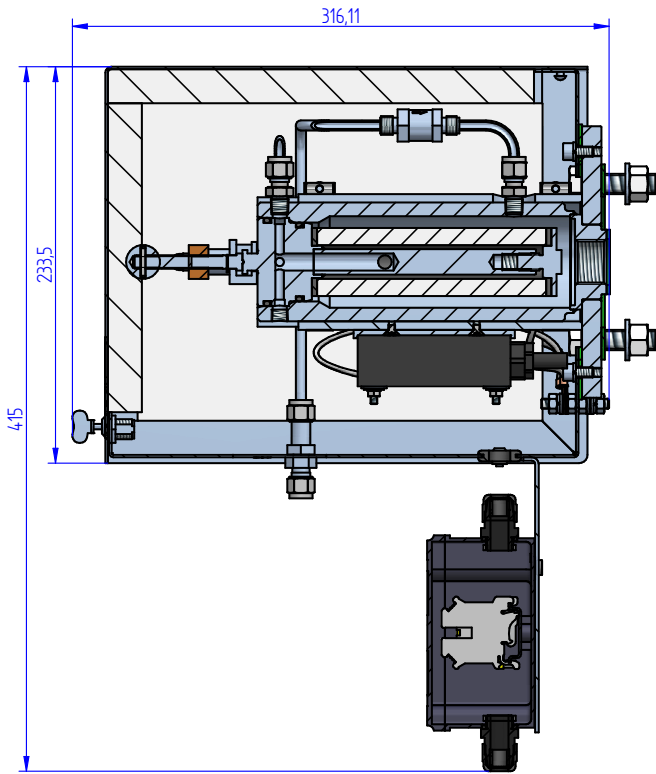
Sample Gas  
Coolers

Gas  
Converters

Accessories



## TECHNICAL DATA



### SPECIFICATIONS

Filter element	Bonded silicon carbide, pore size 2µm, 40/20x135 mm
Option	Surface coated 0,2 µm
Filter surface	170 cm <sup>2</sup>
Operating pressure	max. 200 kPa abs.
Option	max. 700 kPa abs.
Flow rate	up to 600 NI/h, depends on application
Sample gas wetted parts	1.4571, SiC; Viton®
Factory settings	120°C @ 20°C
Heat up time	approx. 180 min
Ambient temperature	0°C...+55°C (larger range available on request)
Flow rate (back purging)	approx. 4 Nm <sup>3</sup> /h @ 4 bar, 5 Nm <sup>3</sup> /h @ 6 bar
Dead volume	177 cm <sup>3</sup>
Mounting flange	DN 65/PN 6, DIN 2573; SS316Ti
Option	2"ANSI Flange; 150lbs.
Mounting angle	range 5° to 15° with respect to the horizontal, sloping down
Mounting position	Torsion angle max. 45°
Weight	approx. 11 kg
Housing material	SS304
Housing colour	Stainless steel natural

### SPECIFICATIONS

Sample gas inlet	G3/4" female thread
Sample gas outlet	1/8" NPT female thread
Calibration port	6 mm bulkhead union, SS316
Back purge port	6 mm bulkhead union, SS316
Heater element	PTC self limited
Power consumption	approx. 80 Watt
Power supply	115...230 VAC 50/60 Hz
Electrical connection	Clamps max. 2,5 mm <sup>2</sup>
Protection class	Heater: IP 68 Probe: IP 43 Junction box: IP66
Type of protection	Heater: II 2 G Ex d IIC T3 II 2 D Ex tD A21 IP65 T200°C Junction box II 2 G Ex dem ia/ib [ia] IIA, IIB, IIC T6/T5/T4 II 2 D Ex tD A21 IP66 T80°C, T95°C, T130°C
Approval / Sign	CE  Heater: PTB 02 ATEX 1116 X IECEX PTB 07.0055X Junction box: PTB 99 ATEX 3103 IECEX PTB 06.0026

## ORDER CODE

Part No.	Model	Filter				Options			Flange		Voltage	Ex Zone
		heated to 120°C	2µm bonded SiC	0,2µm surface coated	Backpurge port *1	Calibration port *1	self-limited	Weather protection	DN65/PN6	2" ANSI *2	115 - 230 VAC 50/60Hz	Ex Zone 1
35.00400	JES 301E1S	X	X				X	X	X	*2	X	X
35.00402	JES 301E1BS	X		X	X		X	X	X	*2	X	X
35.00404	JES 301E1CS	X	X			X	X	X	X	*2	X	X
35.00406	JES 301E1BCS	X		X	X	X	X	X	X	*2	X	X

Scope of delivery: device, mounting material, gasket for flange, gasket for sampling pipe, operating manual

\*1...with non return valve

\*2...on request

SAMPLE PIPES (OD 26,9 MM)*	
Part No.	Description
35.00060	SS316Ti, max. 600°C; l= 1 m
35.00061	SS316Ti, max. 600°C; l= 1,5 m
35.00062	SS316Ti, max. 600°C; l= 2 m
35.00063	SS316Ti, max. 600°C; l= 2,5 m
35.00065	SS316Ti, max. 600°C; l= 3 m
35.00070	SS314, max. 1100°C; l= 1 m
35.00071	SS314, max. 1100°C; l= 1,5 m
35.00050	Kanthal, max. 1200°C; l= 1 m
35.00051	Kanthal, max. 1200°C; l= 1,5 m
35.00052	Kanthal, max. 1200°C; l= 2 m
35.00080	Teflon® (PTFE), max. 140°C; l= 1 m
35.00081	Teflon® (PTFE), max. 140°C; l= 1,5 m
35.00082	Teflon® (PTFE), max. 140°C; l= 0,5 m

IN-SITU PRE FILTER, 3 µM, SS316L, MAX. 550°C, OD 50 MM*	
Part No.	Description
35.00703	L= 0,3 m, up to approx 10 g/m <sup>3</sup>
35.00705	L= 0,5 m, up to approx 20 g/m <sup>3</sup>
35.00710	L= 1 m, up to approx. 30 g/m <sup>3</sup>
35.00803	L= 0,3 m with V-deflector, up to approx. 10 g/m <sup>3</sup>
35.00805	L= 0,5 m with V-deflector, up to approx. 20 g/m <sup>3</sup>
35.00810	L= 1 m with V-deflector, up to approx. 30 g/m <sup>3</sup>

EXTENSION TUBE FOR IN-SITU PRE FILTER*	
Part No.	Description
35.00910	SS316 l= 1 m
35.00920	SS316 l= 2 m
35.00925	SS316 l= 2,5 m
35.00926	Kanthal l= 2,5 m

GASKET FOR EXTENSION- /SAMPLE TUBE	
Part No.	Description
35.00950	Gasket ¾", 38 x 27 x 2 mm, SIL C 4400

\*...Other lengths or sizes are available on request

## ORDER CODE

### FLANGE ADAPTER\*

Part No.	Description
35.08010	SS304 DN65/PN6 to 2 1/2"
35.08030	SS304 DN65/PN6 to DN80/PN6
35.08020	SS304 DN65/PN6 to 3"
35.08040	SS316Ti DN65/PN6 to DN100/PN25
35.01401	Thermal spacer 320 mm

### FLANGE GASKET

Part No.	Description
35.00955	Flange gasket DN65
35.00956	Flange gasket ANSI 2"

### CONSUMABLE PARTS

Part No.	Description
35.90100	Consumable parts kit consisting of 1 x O-ring A and B, 1 x filter element bonded SiC, 2 x gaskets Viton®
35.90101	Consumable parts kit consisting of 1 x O-ring A and B, 1 x surface coated filter element, 2 x gaskets Viton®
35.90010	O-ring A, 200°C, Viton® (FKM)
35.90011	O-ring B, 200°C, Viton® (FKM)
35.90014	Filter element bonded SiC, 2 µm, 40/20 x 135 mm
35.90015	Gasket for filter element, 200°C, Viton® (FKM)

### SPARE PARTS

Part No.	Description
35.90070	T-handle assembly kit
35.90071	Extractor kit complete
35.90091	Non return valve
35.90054	PTC heater element 115 - 230 VAC
K9507401	Junction box

### ACCESSORIES FOR GAS CONNECTIONS

Part No.	Description
35.90080	Male connector for 6 mm tube, SS316
35.90081	Male connector for 8 mm tube, SS316
35.90082	Blind plug, SS316
35.90083	Male connector for 1/4" tube, SS316
35.90084	Male connector for 3/8" tube, SS316
35.90085	Elbow connector for 6 mm tube, SS316
35.90086	Male connector for 10 mm tube, SS316
35.90087	Pipe adapter for G3/8" connector for 10 mm tube, SS316

### ACCESSORIES FOR HEATED HOSES

Part No.	Description
35.00970	PG 42 fitting
35.00980	Mounting clamp (35...50 mm)

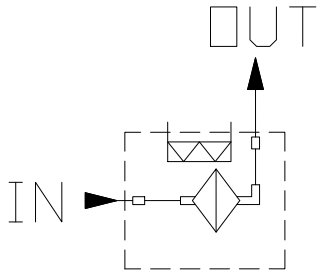
### ACCESSORIES FOR BACK PURGE VERSION

Part No.	Description
35.00110	JES301KE1 Back purge valve box, 230 VAC
35.00111	JES301KE1Y Back purge valve box, 24 VDC
35.00112	JES301KE1 Back purge valve box, 120 VADC
35.90300	PLC (for valve control in safe area)

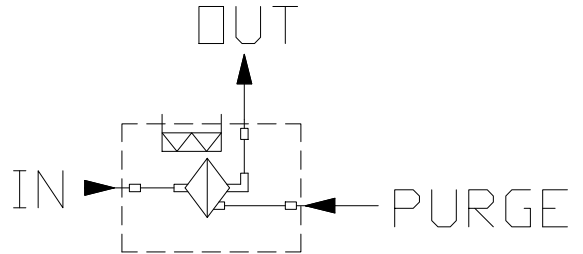
\*...Other lengths or sizes are available on request

# FLOW CHARTS

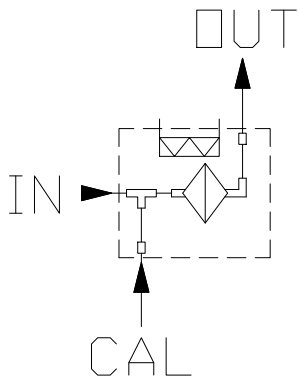
**Basic models**  
(Part No. 35.00400)



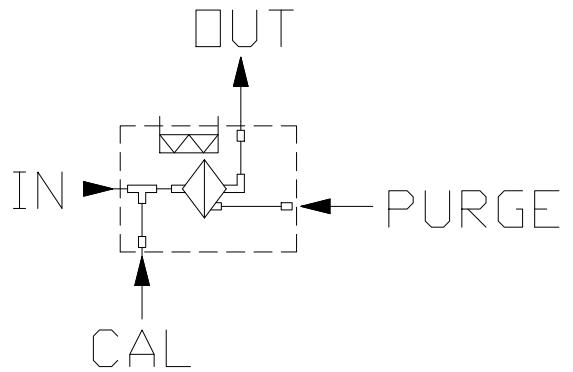
**Models with mit backpurge port**  
(Part No. 35.00402)



**Models with calibration port**  
(Part No. 35.00404)

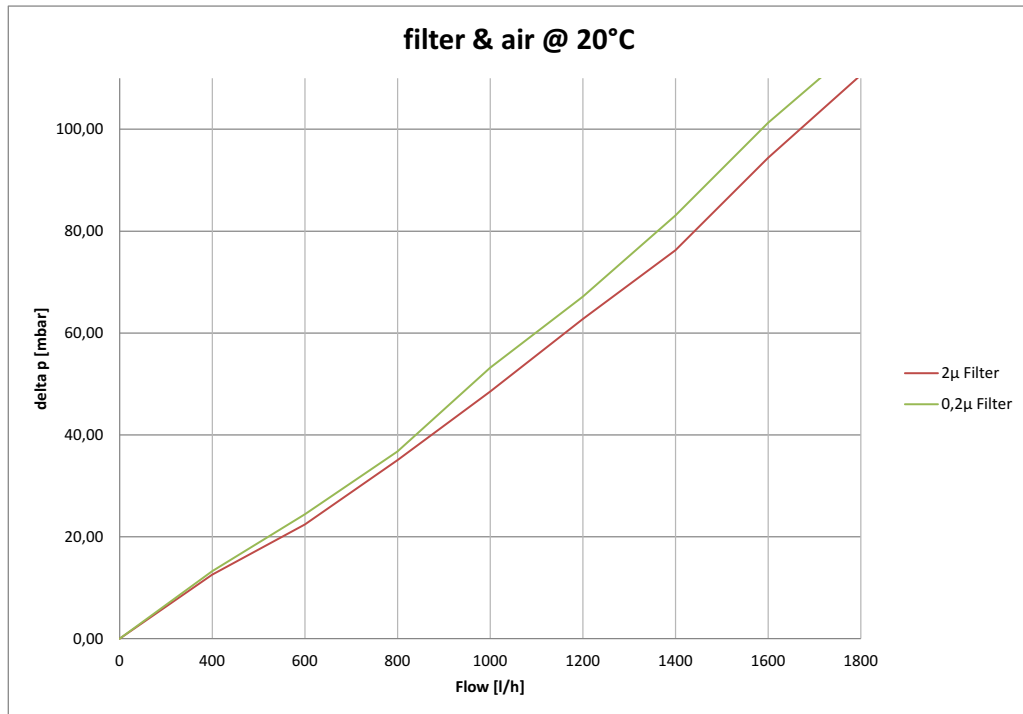


**Models with calibration and backpurge port**  
(Part No. 35.00406)



## FLOW DIAGRAM

Pressure Drop (with new filter)



Specifications are subject to change without notice.

PDS\_E\_JES301E1\_v2.1

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