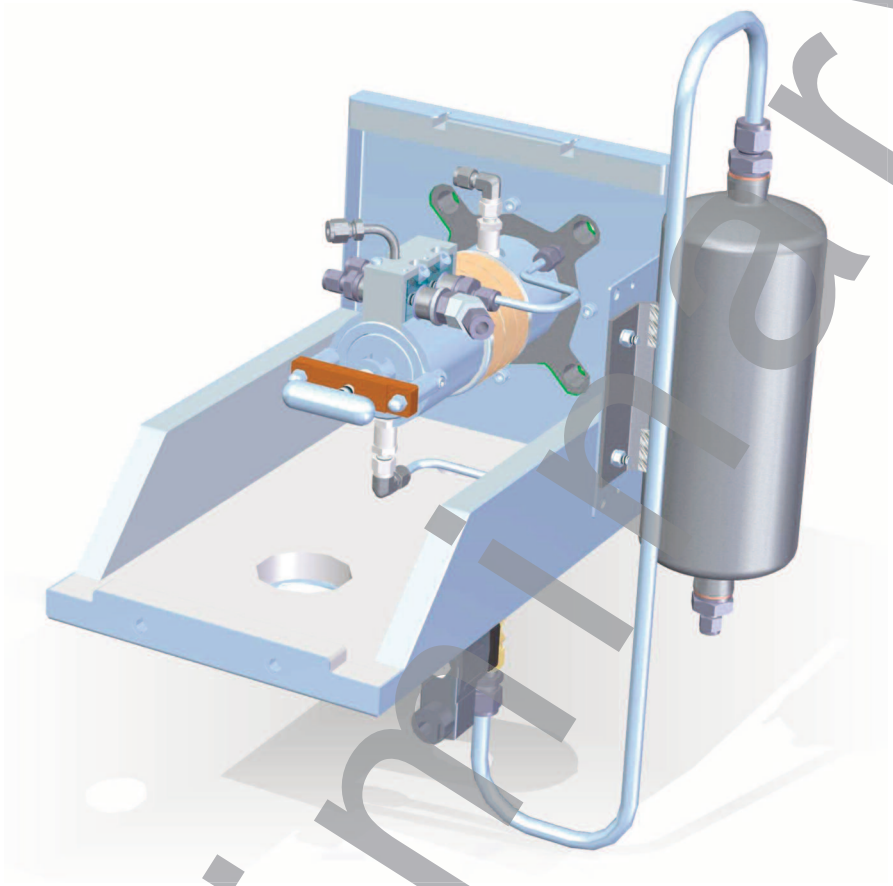
JES-380
Gas sampling probe for Sample Gas Dilution



APPLICATION
- Representative continuous gas sampling in processes containing high dust and humidity
- Extractive gas analysis
- Emission (CEMS) and process monitoring
- Removal of dust from the sample gas
- Dilution of sample gas

BENEFITS
- Cost-optimized solutions
- No condensation or chemical reactions of sample gas
- Continous dilution of agressive sample gas
- Convenient filter replacement
- Low maintenance
- Safe unattended operation
- Easy start-up
- Reliable protection of the analyzer system
- Long filter lifetime

FEATURES
- Different dilution ratio available
- Different consumptions of dilution gas available
- Modular design for custom-tailored applications
- Homogeneous heating without cold spots
- Large active filter surface
- Filtration from outside to inside
- Filter element change without tools
- Different material of filter elements
- Optional over temperature sensor
- Temperature status contact
- Weather protection housing
- Various options and upgrades
- Wide range of accessories
- Integrated back purge control unit (option)

JCT Analysentechnik

Gas Sampling Probes

Heated Sample Lines

Sample Gas Coolers

Condensate Treatment

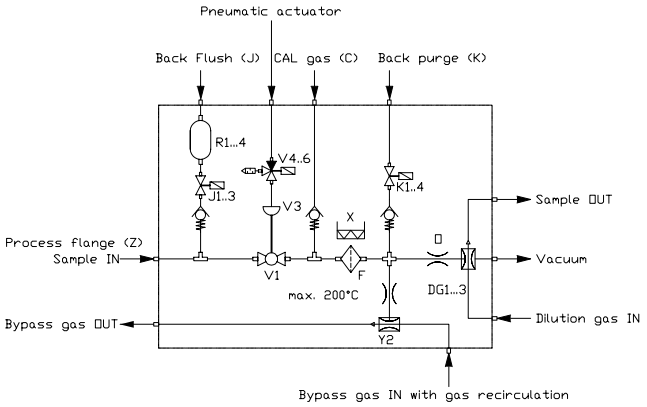
Accessories

Gas Conditioning Systems

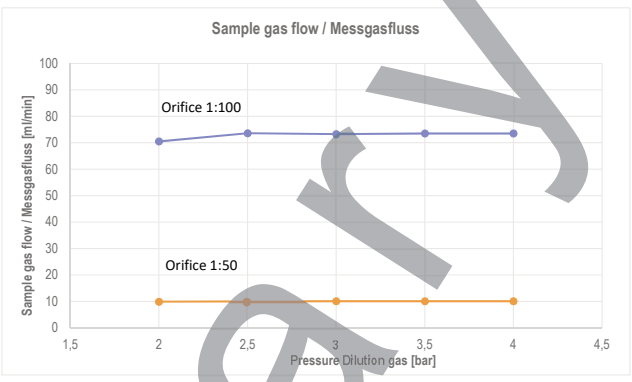
Sample Gas Converters

Model	JES-380
Description	stationary gas sampling probe for sample gas dilution
Operation	
Temperature	180 °C (ex works), adjustable 5 °C to 200 °C
Status limiter set values	−30 K /+20 K fixed to set point
Operating pressure	max. 2 bara (max. 7 bara optional)
Mounting position	5° to 15° incline (recommended), torsion angle max. 45°
Heating-up time	approx. 2 h
Ambient temperature	for start-up −20 °C to 60 °C for continuous operation −30 °C to 60 °C
Dilution unit	
Dilution ratio	1:500 / 1:200 / 1:100 / 1:50 / 1:25 / 1:12,5 / 1:10
Operation pressure	4 to 5 bara
Consumption of dilution gas	500 l/h / 1000 l/h / 3000 l/h
Suction sample gas	4 to 40 l/h at 4 bara (depends on dilution ratio)
Admissible back pressure	< 50 mbar
Dilution gas	purified instrument air or inert gas (e.g. nitrogen 5.0)
Construction	
Dimensions over all (W x H x D)	375 x 418 x 449 mm
Dimensions connection box (W x H x D)	120 x 160 x 90 mm
Filter element	2 µm ceramic or 0,2 µm ceramic surface coated
Active filter surface	170 cm^2
Mounting flange	DN 65, PN6; 2“ ANSI 150 lbs; DN 80, PN 6; 3“ ANSI 150 lbs
Sample gas inlet	DN65 & 2” flange G 3/4“ female thread; 3” flange G1/2”
Sample gas outlet	3/8“ female thread
Gas wetted materials	SS316L, ceramic, Viton®, Kalrez®, glass
Protection class	junction box IP65, probe IP43
Weight	approx. 17 kg, depending on options
Weather protection housing	SS304, thermal insulated, colour stainless steel natural
Approvals / Signs	CE
Electrics	
Power supply	230 VAC 50 Hz or 115 VAC 60 Hz
Power consumption	approx. 805 VA
Temperature controller / Sensor	electronic / Pt100 (IEC-751)
Electrical connection	spring type terminals, clamping range 0,08 to 2,5 mm^2
Status contact (volt free)	230 VAC / 2 A, min. 5 VDC / 5 mA

FLOW CHART

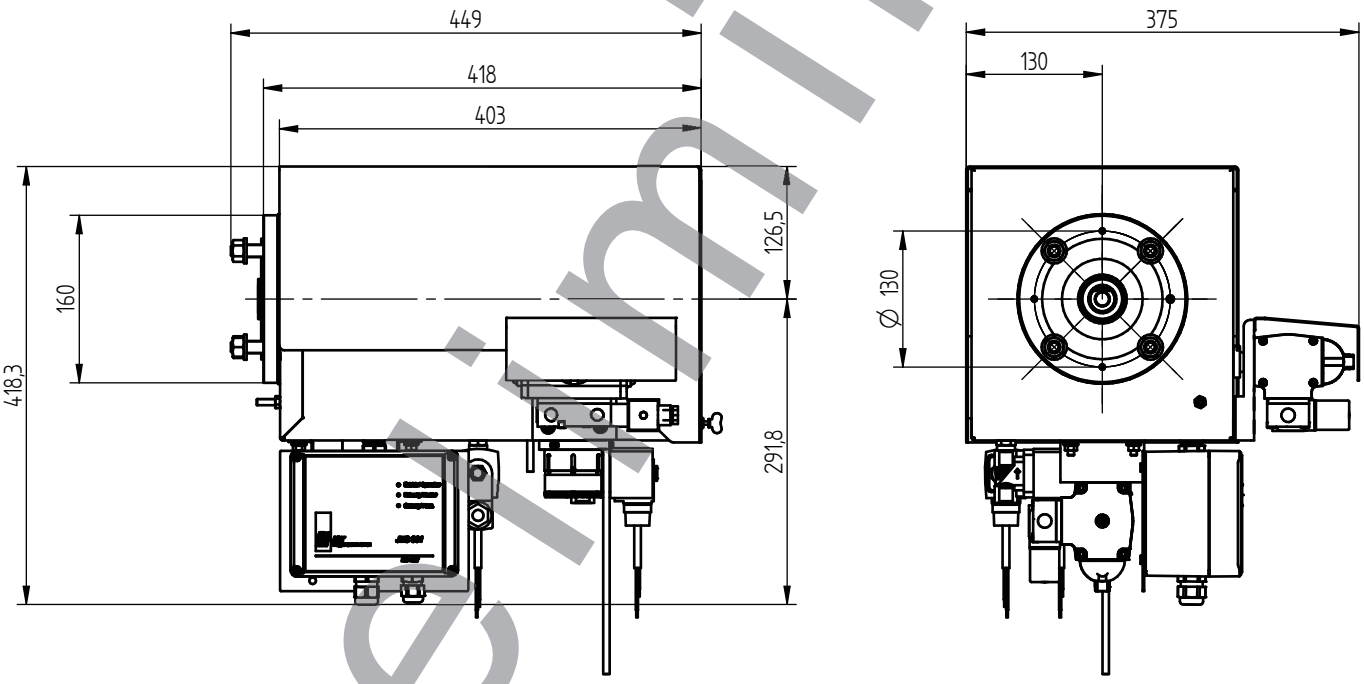


Performance diagram



DIMENSIONS

Dimensions in mm



DILUTION RATE AIR

	Verdünnungsrate/ Dilutionrate									
Verdünnungsgas	1:500	1:200	1:100	1:50	1:37,5	1:25	1:20	1:12,5	1:10	Dilution Gas
500 l/h			OR1 / 010	OR2 / 015		OR3 / 020	OR4 / 025	OR5 / 030	OR6 / 035	500 l/h
1000 l/h		OR1 / 010	OR2 / 015	OR3 / 020	OR4 / 025	OR5 / 030	OR6 / 035	OR7 / 040	OR8 / 050	1000 l/h
3000 l/h	OR1 / 010	OR2 / 015	OR3 / 020	OR5 / 030	OR6 / 035	OR7 / 040	OR8 / 050			3000 l/h
	Verdünnungsdüse/ Dilution Orifice									

ORDER CODE

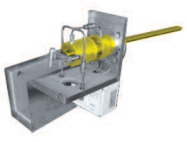
Scope of delivery: sampling probe, mounting material, flange gasket, gasket for sampling pipe, operating manual

Basic model JES-380	Dilution unit	
includes	Weather protection housing	
	Vacuum port on dilution unit	
	Calibration port with non return valve	
Available Features		
Flange	DN65 PN6	Z1
	2" ANSI 150 lbs	Z2
	DN80 PN6	Z3
	3" ANSI 150 lbs	**Z4**
Filter	**2 µm ceramic**	**F1**
	0,2 µm ceramic surface coated	F2
Heater and temperature controller	without heater	X0
	heater 230 VAC 50/60 Hz with temp. controller 180 °C	X1
	heater 115 VAC 50/60 Hz with temp. controller 180 °C	X2
	heater 230 VAC 50/60 Hz with junction box	X3
	heater 115 VAC 50/60 Hz with junction box	**X4**
Process shut off ball valve	**without shut off ball valve**	**V0**
	with manual operation	V1
	with pneumatic actuator	V2
	with pneumatic actuator and pilot valve 24 VDC	V3
	with pneumatic actuator and pilot valve 115 VAC	V4
	with pneumatic actuator and pilot valve 230 VAC	V5
	with electric actuator, 230 VAC	V6
Back purge valve/Port sample probe filter	**without**	**K0**
	back purge port with non return valve	K1
	back purge port with non return valve 24 VDC	K2
	back purge port with non return valve 115 VAC 50/60 Hz	K3
	back purge port with non return valve 230 VAC 50/60 Hz	K4
Pre-filter back flush valve	**without**	**J0**
	24 VDC	J1
	115 VAC 50/60 Hz	J2
	230 VAC 50/60 Hz	J3
Air accumulator	**without**	**R0**
	air accumulator 2 l	R1
	air accumulator 5 l	R2
	air accumulator heated 2 l	R3
	air accumulator heated 5 l	R4
Dilution gas	500 l/h	DG1
	1000 l/h	DG2
	3000 l/h	DG3
Dilution orifice	orifice 010	OR1
	orifice 015	OR2
	orifice 020	OR3
	orifice 025	OR4
	orifice 030	OR5
	orifice 035	OR6
	orifice 040	OR7
	orifice 050	OR8
Bypass	**without bypass**	**Y0**
	with bypass	Y1
	with bypass and recirculation to process	Y2
Fitting aperture for sample gas line	fitting aperture for diameter 35-50 mm	MC1
	fitting aperture for diameter 58-61 mm	**MC2**
Connection ports	**inch**	**A1**
	metric	A2
Additional Options		
Others	additional temperature sensor	TS

Order code	JES-380.	Z	F	X	V	K	J	R	DG	OR	Y	MC	A	-

JCT Analysentechnik GmbH offers a wide range of accessories. Please refer to seperate data sheets for further information.

Gas Sampling **Probes**



Heated Sample **Lines**

Sample Gas **Coolers**

Gas Conditioning **Systems**

NOx **Converter**

and **solutions** for

fixed installation

portable

JCT Analysentechnik GmbH | Werner Heisenberg-Strasse 4 | 2700 Wiener Neustadt | AUSTRIA | T +43 2622 87201 | sales@jct.at