



# 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 sample gas
- Dilution of sample gas

### BENEFITS

- Cost-optimized solutions
- No condensation or chemical reactions of sample gas
- Continuous dilution of aggressive 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 and 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
- Different material of filter elements
- Optional over temperature sensor
- Temperature status contact
- Weather protection housing
- Integrated back purge control unit (option)



## TECHNICAL DATA

### MODEL

### JES-380

Description	stationary gas sampling probe for sample gas dilution
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### OPERATION

Temperature (variant X)	180 °C (ex works), adjustable 5 °C to 200 °C
Status limiter set values	–30 K / +20 K fixed to set point
Mounting position	5° to 15° incline (recommended), torsion angle max. 45°
Heating-up time	approx. 120 min
Ambient temperature	for start-up –20 °C to 60 °C for continuous operation –30 °C to 60 °C

### DILUTION UNIT

Dilution ratio (feature OR)	1:500 / 1:200 / 1:100 / 1:50 / 1:37,5 / 1:25 / 1:12,5 / 1:10
Operation pressure	4...5 bara
Consumption of dilution gas (feature DG)	500 l/h, 1000 l/h
Suction sample gas	4 to 40 l/h at 4 bara (depends on dilution ratio)
Admissible back pressure	< 50 mbara
Dilution gas	purified instrument air or inert gas (e.g. nitrogen 5.0), > 6 bara

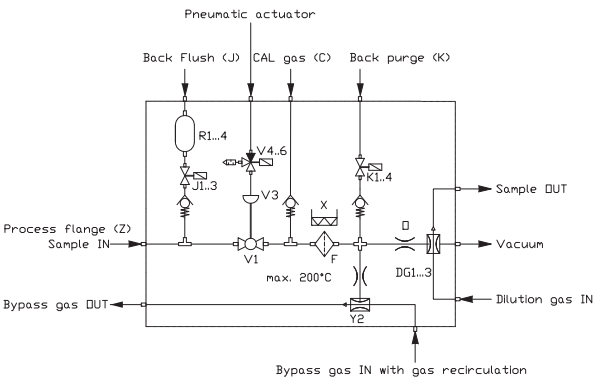
### CONSTRUCTION

Dimensions over all (W x H x D)	475 x 418 x 645 mm
Dimensions connection box (W x H x D)	120 x 160 x 90 mm
Filter element (feature F)	2 µm ceramic or 0.2 µm ceramic surface coated
Active filter surface	170 cm <sup>2</sup>
Mounting flange standards (feature Z)	DN 65, PN 6; DN 80 PN 6; Form A according to EN 1092-1 2" ANSI 150 lbs, 3" ANSI 150 lbs according to ASME B16.5
Sample gas inlet	DN65 & 2" flange: G 3/4" female thread; DN80 flange: G 1/2"; 3" flange: NPT 1/2"
Sample gas outlet	DN65 & DN80 flange: 8 mm tube fitting; 2" & 3" flange: 3/8" tube fitting
Back purge connection (feature B)	6 mm or 1/4" fitting
Back Flush connection (feature J)	12 mm fitting
Air accumulator	unheated or thermostatic regulation 100 °C
Gas wetted materials	SS316L, ceramic, Viton®, 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

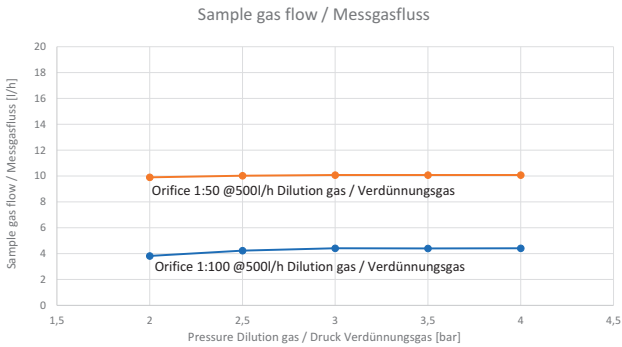
### ELECTRICS

Power supply	230 VAC 50 Hz or 115 VAC 60 Hz
Power consumption	approx. 805 VA
Temperature controller / sensor	electronic / Pt100 RTD (IEC-751)
Electrical connection	spring type terminals, clamping range 0.08 to 2.5 mm <sup>2</sup>
Status contact (volt free)	230 VAC / 2 A, min. 5 VDC / 5 mA

FLOW CHART



Performance diagram



Drawing shows all possible options,selection according order code.

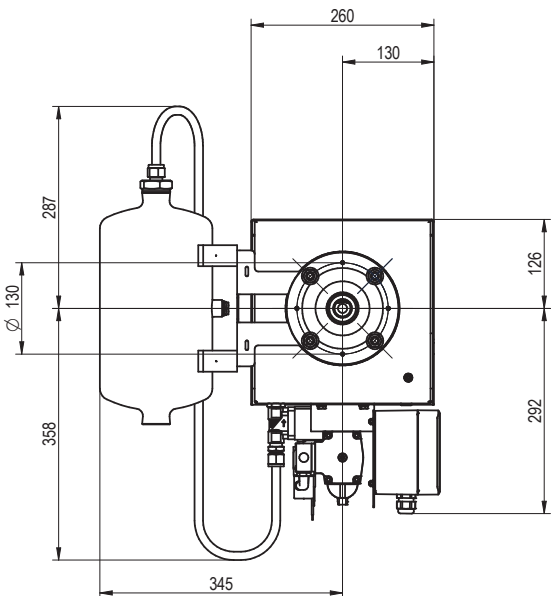
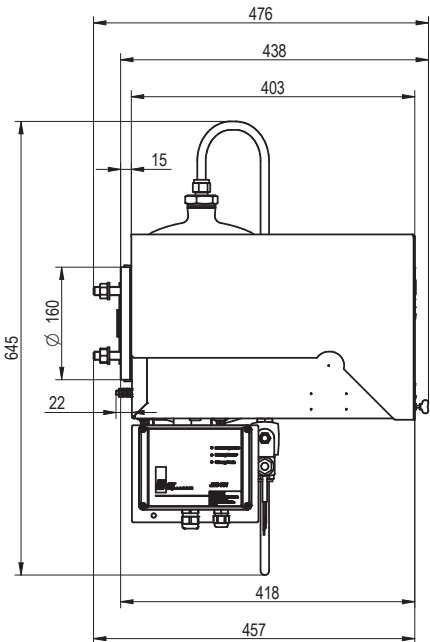
DILUTION GAS

Dilutionrate									
Dilution gas	1:500	1:200	1:100	1:50	1:37.5	1:25	1:20	1:12.5	1:10

Dilution orifice									
DG1 500l/h	-	-	OR1/010	OR2/015	-	OR3/020	OR4/025	OR5/030	OR6/035
DG2 1,000l/h	-	OR1/010	OR2/015	OR3/020	OR4/025	OR5/030	OR6/035	OR7/040	OR8/050

DIMENSIONS

dimensions in mm



includes	dilution unit
	weather protection housing
	vacuum port on dilution unit
	calibration port with non-return valve

		Z	F	X	V	K	J	R	DG	O	Y	MC	A	-	TS
Flange	DN65 PN6 2" ANSI 150 lbs DN80 PN6 <b>3" ANSI 150 lbs</b>	Z1 Z2 Z3 Z4													
Filter	<b>2 µm ceramic</b> 0.2 µm ceramic surface coated PTFE filter element stainless steel filter element glass wool filter element	F1 F2 F3 F4 F5													
Heater and temperature controller	without heater heater 230 VAC 50/60 Hz with temp. controller 180 °C heater 115 VAC 50/60 Hz with temp. controller 180 °C heater 230 VAC 50/60 Hz with junction box <b>heater 115 VAC 50/60 Hz with junction box</b>	X0 X1 X2 X3 X4													
Process shut-off ball valve	<b>without shut-off ball valve</b> with manual operation with pneumatic actuator with pneumatic actuator and pilot valve 24 VDC with pneumatic actuator and pilot valve 115 VAC with pneumatic actuator and pilot valve 230 VAC with electric actuator, 230 VAC	V0 V1 V2 V3 V4 V5 V6													
Back purge valve / Port sample probe filter	<b>without</b> back purge port with non-return valve back purge port with non-return valve 24 VDC back purge port with non-return valve 115 VAC 50/60 Hz back purge port with non-return valve 230 VAC 50/60 Hz	K0 K1 K2 K3 K4													
Prefilter backflush valve	<b>without</b> 24 VDC 115 VAC 50/60 Hz 230 VAC 50/60 Hz	J0 J1 J2 J3													
Air accumulator	<b>without</b> air accumulator 2 l air accumulator 5 l air accumulator heated 2 l, 115 VAC air accumulator heated 2 l, 230 VAC air accumulator heated 5 l, 115 VAC air accumulator heated 5 l, 230 VAC	R0 R1 R2 R3 R4 R5 R6													
Dilution gas	500 l/h 1,000 l/h	DG1 DG2													
Dilution orifice	orifice Ø10 orifice Ø15 orifice Ø20 orifice Ø25 orifice Ø30 orifice Ø35 orifice Ø40 orifice Ø50	OR1 OR2 OR3 OR4 OR5 OR6 OR7 OR8													
Bypass	<b>without bypass</b> with bypass with bypass and recirculation to process	Y0 Y1 Y2													
Mounting hole for sample gas line	for diameter 35-50 mm <b>for diameter 58-61 mm</b>	MC1 MC2													
Connection ports	<b>inch</b> metric	A1 A2													
<b>Additional Options</b>															
Others	additional temperature sensor														
<b>Order Code</b>		<b>JES-380.</b>	Z	F	X	V	K	J	R	DG	O	Y	MC	A	-

**JCT** offers a wide range of accessories. Please refer to separate data sheets for further information.