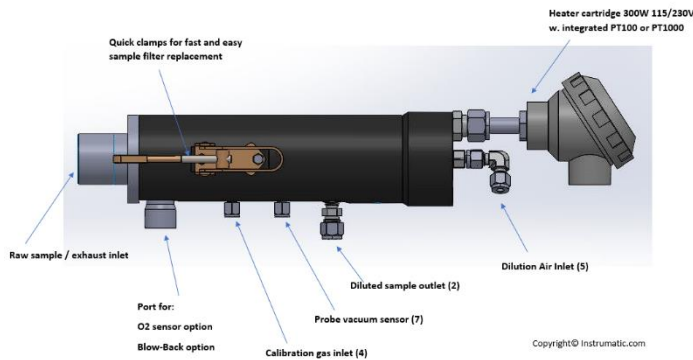




OXYDAN[®] Exhaust Gas Dilution Probe

OXYDAN[®] DP7900

Exhaust gas dilution probe



Exhaust Gas Sampler Continuous Sampling

Applications

- CEMS SO₂, CO₂, NO_x, CH₄, N₂O, CO....
- Process control
- Compliance verification
- Emission reporting ETS, MRV, EPA...

OXYDAN[®]

Features and benefits

- Unheated Sample Line
- Filter cartridge w. orifice easily exchangeable for other dilution rates.
- Sample Gases aren't lost / absorbed.
- Direct "Wet Basis" Measurement
- Calibration gas directly to the probe
- Zero Velocity filter method
- Fast response time
- Sample clean as the ambient air, no contamination of sensors / analyzers
- Easy integration of CEMS
- No moving parts



Overview

The technique is based on extracting a small sample from the stack, removing particulates by a proprietary filter, and then accurately diluting the sample with clean, dry zero air thus, reducing the dew point to prevent condensation of water vapor and acid mist in the sample line.

The diluted sample is then forced under pressure in unheated sample line to the location where it is analyzed by gas sensors / analyzers.

The dilution probe system uses dry contamination-free air ("dilution air") and an ejector (also referred to as a venturi pump) to extract a diluted exhaust gas sample from an exhaust stack or duct.

Calibration of the system is achieved effectively by sending span or zero gas directly to the stack and directly into probe. This method ensures the complete sampling train and sensor system are compensated from probe tip to concentrations read out and provide very precise and accurate measurement results.

Once you connect instrument air from a swing absorption dryer and a power supply to the self-regulating heater, the probe will initiate the delivery of a diluted sample to your sensors or analyzers.

Specifications:

Model	OXYDAN® DP7900:2017 / DP5					
Application	Continuous Emission Monitoring System / Process control					
Sampling Method	Dilution / extractive					
Dilution ranges *	Orifice size	Flow Nom.	3,7 bar	4,2 bar	5 bar	5,5 bar
	Sample	ml/min.	Dil. Rate	Dil. Rate	Dil. Rate	Dil. Rate
	8	50	304	318	377	413
	10	79	195	203	241	264
	12	113	135	141	168	183
	15	177	86	90	107	117
	17	227	67	70	83	91
	18	254	60	62	74	81
	20	314	48	50	60	66
	25	491	31	32	38	42
	30	707	21	22	26	29
<i>Dilution rates are approximated. Total sample flows 10 to 15 L / min.</i>						
Sample gas temperature	Max. 500 °C (optional 1200°C)					
Probe temperature **	~150 to 200 °C					
Particulate filter	Zero velocity filter, pore diameter down to 1 µm					
Ambient temperature	Probe 0 to 90 °C					
Instrument air	Min. 6 bar non-condensing, oil free (consumption 20 NLPM)					
Instrument air quality requirements	ISO8573:1 – 2001, Class 2 dirt (1 micron) and Class 2 water (-40° C/F pressure dew point)					
Probe heater supply	Voltage			Consumption		
	24VDC / 240V AC 50/60			250W / 250 W		
Probe materials	Probe: Stainless steel 316L **** / Heater jacket: Aluminum Anodized					
Pneumatic connections	8 / 6 / 4 mm SS316 compression fittings					
Process connection	1 1/4" G other as flanges consult factory					
Probe size	~ 35 x Ø13 cm not including insulation jacket					
Probe weight ***	Probe 4 kg not including flange					
Options	Quick Couplings – O2 sensor – Probe flanges sizes consult factory – CAN Bus control box					
<p style="text-align: center;"><i>* Dilution rates are nominal values, ** temperature controlled, *** With 1 ¼" process fitting, **** Optional Silcotek Coated</i></p> <p style="text-align: center;"><i>"This material is for reference only. Instrumatic EMI has taken all reasonable care to ensure the reliability of the information contained in this document, but makes no guarantees, warranties, or representations regarding the accuracy or completeness of the information. Any reproduction of this material requires prior permission from Instrumatic EMI A/S in writing."</i></p> <p style="text-align: center;"><i>Subject to change without notice - Instrumatic EMI © Copyright 2023.</i></p> <p style="text-align: center;"><i>OXYDAN® is the registered trademark of Instrumatic Holding ApS.</i></p>						

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