Compliance test DIN EN 12341 **Comde-Derenda GmbH, PNS-18T3.1DM**		TÜV SÜD Industrie Service
Date: 29.03.2017	**Declaration of conformity**	

Hereby we confirm that the Sequential Low Volume Sampler PNS-18T3.1DM by Comde-Derenda GmbH complies with the European Standard EN12341:2014 (with restrictions see footnotes) and can be used as a Standard / Reference Sampler for PM_{10} and $PM_{2.5}$.

Procedure: The assessment was based on (DIN) EN12341 version August 2014. The requirements for the components of the sampler are described in chapter 5.1 in (DIN) EN12341:2014, further activities for quality control and quality assurance are described in chapter 7.

In order to show compliance of PNS-18T3.1DM with the standard (DIN) EN12341:2014 the following requirements were examined:

- Sampler design
- Temperature of filter during sampling
- Nominal flow rate *
- Constancy of sample volumetric flow
- Leak tightness of the sampling system
- Single-filter sampling period
- Uncertainty of sampling time measurement
- Uncertainty of temperature and pressure sensors
- Temperature of storage for sampled filters **
- Recording of operational parameters
- Effect of failure of supply voltage
- Effect of abortion of sampling due to high pressure drop over the filter

The PNS-18T3.1DM Sequential Low Volume Sampler is suitable for continuous ambient air monitoring of PM_{10} and $PM_{2.5}$ (with suitable inlets) and specified for the ambient air temperature range of -20 to +50°C.

* Restrictions:	The flow rate has to be calibrated near the ambient air temperature. If the mean (daily) ambient air temperature varies more than ±18 °C of the temperature at flow calibration the flow rate may differ more the ±2 % of the nominal flow of 2,3 m³/h.
** Limitation:	Above an ambient air temperature of 35 °C the temperature of storage for sampled filters may rise above 23°C.

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Summary of the test results
Low Volume Sampler PNS-18T3.1DM in compliance with (DIN) EN 12341:2014

Instrument tested: PNS-18T3.1DM, S/N 10456, 10394
Temperature range tested: -20 °C to +50 °C

No. of the Guideline	Parameter	Requirement	
		In compliance	Note
5.1.1	Sampler design	X	
5.1.2	Inlet design (PM_{10}, $PM_{2,5}$)	Not part of the test	
5.1.3	Tubing	X	
5.1.4	Temperature of filter during sampling	X	
5.1.4	Effective filter area	X	
5.1.5	Nominal flow rate	X [1)]	
5.1.5	Constancy of sample volumetric flow	X [1)]	
5.1.5	Uncertainty of sensors for temperature and pressure measurement	X	
5.1.6	Period of sampling for one filter	X	
5.1.7	Leak tightness of sampling system	X	
5.1.8	Temperature of storage of sampled filters in the instrument	X [2)]	
Table 1 No. 13	Recording of operational parameters	X	
Table 1, No. 14	Effect of failure of mains voltage	X	
Table 1 No 15	Effect of abortion of sampling due to high pressure drop	X	

[1] The flow rate has to be calibrated near the mean of ambient air temperature. If the mean (daily) of ambient air temperature varies more than ±18 °C of the temperature at flow calibration the flow rate may differ more the ±2 % of the nominal flow of 2,3 m³/h.
[2)] Above an ambient air temperature of 35 °C the temperature of storage for sampled filters may rise above 23°C.