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**Test certificate
Validation according ISO 8573-1: 2010 Part 1:
Contaminants and purity classes**

Dear Sirs,

We have measured the total oil content (aerosols, liquids and vapours) in the outlet air stream of a Spiralair oil-free scroll air compressor. The measurements were done in accordance with the following guidelines and standards:

ISO 8573-1 : 2010 Part 1 : Contaminants and purity classes

ISO 8573-2 : 2007 Part 2: Test methods for aerosol oil content method B1 (full flow method)

ISO 8573-5 : 2001 Part 5: Test methods for oil vapour and organic solvent content

This being a type test, covering the entire range of oil free scroll air compressors (SPR 2 - 30) a model was randomly selected for the tests. For the tests a compressor type: SPR5 T, 3.7 kW (5 hp) with integrated dryer was selected. The tests were carried out at the outlet of the air compressor without any oil removal devices in between the compressor and the measurement point. The conditions of the test were:

Temperature at the measurement point (M): ca. 28 °C

Temperature at the measurement point (C): ca. 28° C

Pressure at the measurement point (M): 8.8 – 9.5 bar (e)

Pressure at the measurement point (C): 0.4 – 9.6 bar(e)

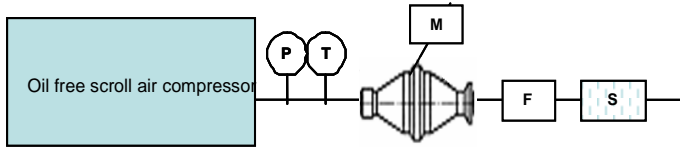
Maximum Free Air Delivery: 5.9 l/s @ 10 bar (e)

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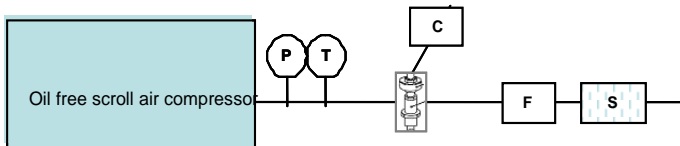
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Geschäftsführung
Marcus Staude
Amtsgericht Köln HRB 56171

Principle diagram for full flow measurement of Aerosols and liquids as per ISO 8573 Part 2, method B1



Principle diagram for measurement of oil vapour and organic solvent content as per ISO 8573 Part 5



- Legend :
- P : Pressure indicator
 - T : Temperature indicator
 - M : Measurement point with membrane
 - F : Flow meter
 - S : Silencer
 - C : Measurement point for oil vapour

It is to certify that at the test conditions, no oil ($c < 0.01 \text{ mg/m}^3$) deriving from the compressor (including all hydrocarbons C6 and above) could be determined in the compressed air stream. On the basis of this test, we can certify the results to be valid for the above mentioned oil-free scroll air compressors (SPR 2 - 30).

It is to certify that the quality of air from the above compressors qualifies to be in the category 'Class 0' in terms of total oil content, as defined in the standard ISO 8573-1 : 2010 Part 1

A detailed report with all conditions of the tests and results is available.

Best Regards

i. V. *U. Dormagen* i. A. *N. Horlemann*

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Dr. rer. nat. Norbert Horlemann