Product Flyer

AirSense

Published in May 2019 - technical changes reserved

V&F
Analyse- und
Messtechnik
GmbH

Process Mass Spectrometer AirSense

Fast Response and Selectivity

Knowing the customer's high profile expectations combined with more than 30 years of experience, the model AirSense reflects the latest development step within the series of our process mass spectrometers. Focusing applications for non-limited gas components, online gas analysis should offer reliability, highest possible flexibility and robustness, all in one.

Proven Technology

The AirSense is based on the Ion-Molecule Reaction (IMR) mass spectrometer principle and is the multi-purpose level model focusing applications for non-limited gas components, highest flexibility and robustness all in one. Unlike others, the IMR mass spectrometry offers a unique fast response time, a wide dynamic range, selective measurements and lowest detection limits. Minimized service- and operation costs, flexibility and user friendly handling are achieved by combination of well proven technology and state of the art manufacturing capabilities.

High operating comfort

An easy-to-use software package - the V&F Viewer program - comprises system controls and measurement configurations, data acquisition from the analyzer via TCP/IP network using the Microsoft.NET framework. Alternatively, the analyzer can be operated via AK protocol. Functions for matrix correction and calibration are integrated in the V&F Viewer program. These features allow for high accuracy and reproducibility. Graphical representation of all important data enables the user to quickly assess the quality of the measurement as well as the overall instrument performance.

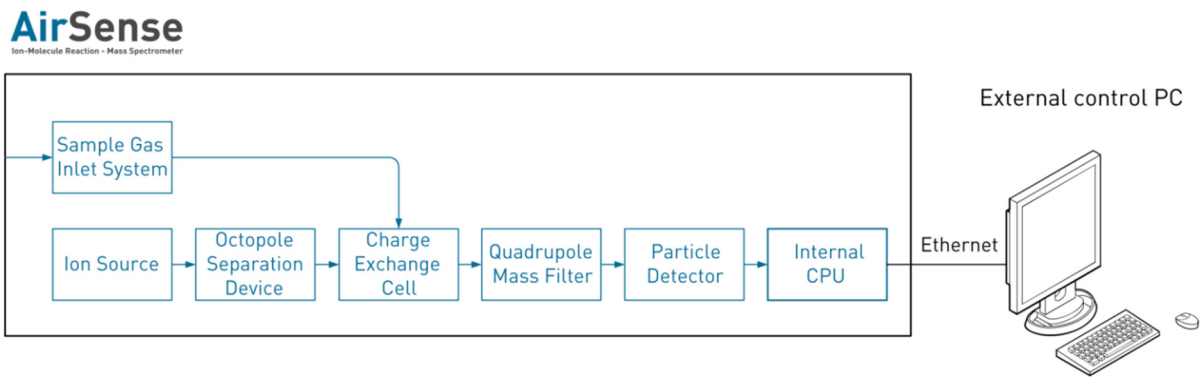
Typical Applications

The V&F AirSense is state-of-the-art for most of the applications in the following fields:

- Automotive Applications
- Food, Beverages & Tobacco Applications
- Environmental Applications
- Applications in various Industries

Function principle

The AirSense is a mass spectrometer based on the patented Ion-Molecule Reaction (IMR-MS) and can be used for a broad field of applications. By using IMR technique, the measurement becomes fast, selective and free of any interference. Unlike others, no fragmentation or overlapping spectra can damage the interpretation of the detected results.



IMR means the use of primary ions with low energy level (10 eV to 14 eV) to completely ionize the probe gas molecules. The signal/noise ratio is optimized by the integrated octopole separator, focusing the primary ions and filtering out any interference. The quadrupole mass filter (7-519 amu) separates the molecules for further detection at the fast pulse counter. The temperature- and pressure compensated sample gas inlet guarantees correct measurements and avoids any discrimination of the gas. Any contamination due to condensation or particulate matters is minimized.

Features, benefits

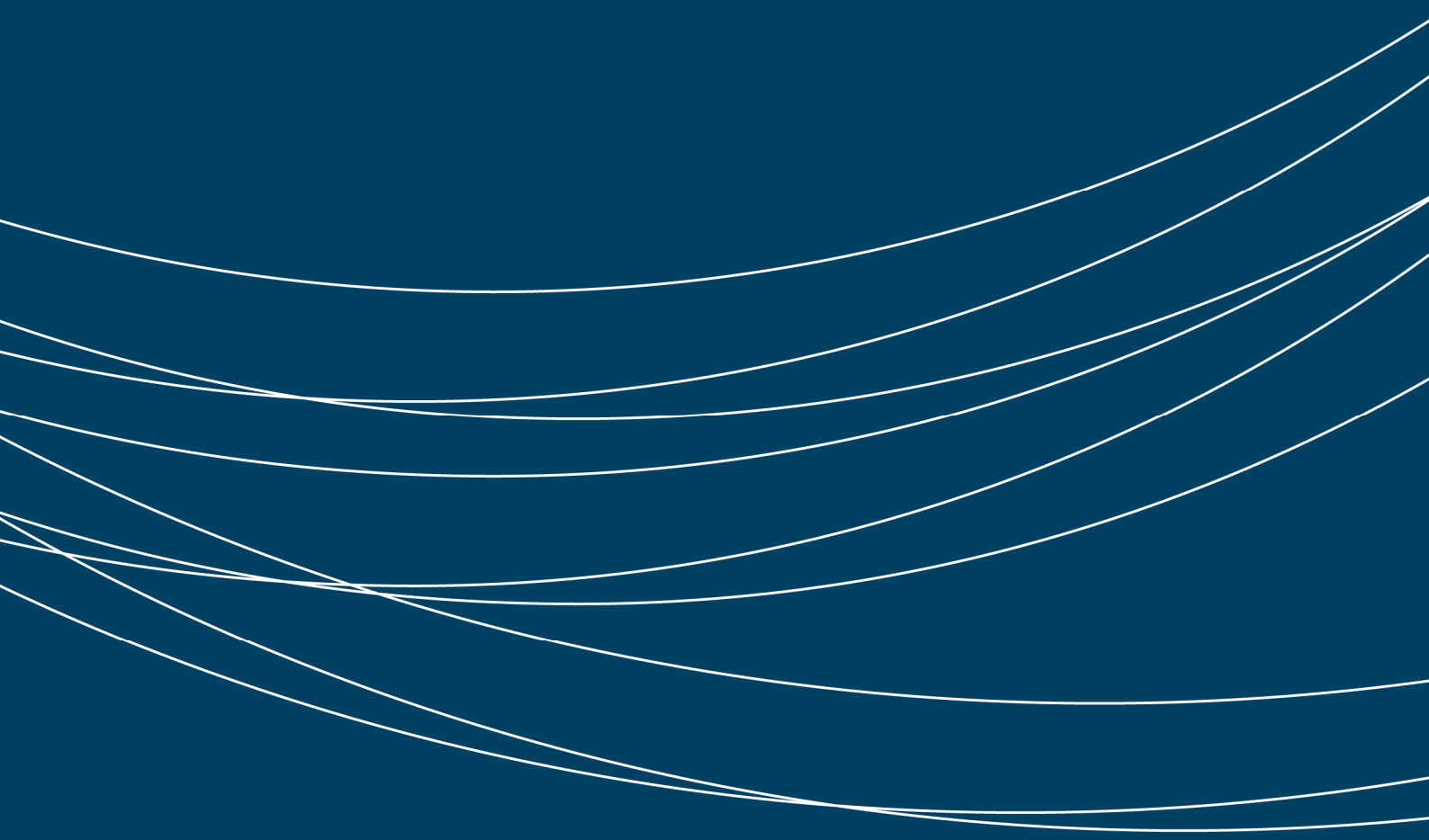
- wide dynamic range with lowest detection limits
- robust and reliable
- highest possible flexibility together with a unique fast response time
- high in sensitivity and selectivity
- automatic pressure regulation ranging from 0.75 to 2 bar(a)
- integrated matrix – correction – calculation and auto-calibration
- temperature controlled gas inlet, no sample preparation (wet, ambient air) needed
- user friendly software package - operator interface with 4-button control
- minimized service- and operation costs

Specification, technical data

Technical Data	IMR-MS	Technical Data	IMR-MS
Mass range	7 – 519 amu	**Ambient temperature**	20°C - 35°C
Resolution	‹ 1 amu	**Humidity max.**	80 % (non-condensing)
Analysis time	›= 1 msec/amu	**Gas consumption[2]**	30 – 3000 ml/min
Measuring range[1]	10^5	**Gas inlet temperature**	50°C – 190°C adjustable
Response time[1]	T90 ‹ 20 msec	**Gas inlet pressure[2]**	0.75 – 2 bar(a)
Lower detection limit[1]	0.4 ppt	**Power**	230V/50Hz or 115V/60Hz 800 W
Concentration drift	‹ ± 5% over 24 h	**Dimension (WxHxD)**	534 x 743 x 639 mm
Reproducibility	‹ ± 3%	**Weight**	87 kg
Accuracy	‹ ± 2%		

[1] depending on the measured components, system setup and the settings

[2] depending on the type of gas inlet system



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