



# Precision and ultrafine cleaning

with residual gas analysis (RGA)

- Guaranteed cleaning results with VACOM® Purity Classes
- In-house examination of component cleanliness by residual gas analysis
- All processes in cleanrooms classes ISO-7, ISO-6 and ISO-5

## Ultrafine cleaning with residual contamination analysis

- Industrial ultrafine cleaning for highest demands
- Elimination of film contaminations by wet and dry cleaning
- Flexible and order-optimized processes with various cleaning procedures
- Components of any geometric shapes with a maximum size of 1300x1500x1500 mm and a weight of 500 kg
- Examination of the cleaning results with highly sensitive methods for particulate and film contaminations
- Preservation of component cleanliness by cleanroom suitable packaging
- Scientific monitoring and optimization of processes
- Short lead times through efficient planning and logistics
- Processes are ISO 9001:2008 certified and have been awarded by the German Federal Ministry of Economics and Technology
- Optimized cleaning results for various materials like stainless steel, aluminum, non ferrous metals, titanium, viton, and elastomers

## VACOM® Purity Classes:

		Class S	Purity Class 1	Purity Class 2	Purity Class 3	Purity Class 4	Purity Class 5
Accumulated molecular contamination*		g/cm <sup>2</sup>	< 1E-5	< 2E-8	< 7E-9	< 5E-9	< 3E-9
Outgassing (after 10h) for simple geometries	Stainless steel, Titanium, Nickel	H <sub>2</sub> O [mbar·l/(s·cm <sup>2</sup> )]	n/s	n/s	< 2E-9	< 4E-10	< 2E-10
		C <sub>x</sub> H <sub>y</sub> (45...100) [mbar·l/(s·cm <sup>2</sup> )]	n/s	n/s	< 5E-12	< 4E-12	< 2E-12
		C <sub>x</sub> H <sub>y</sub> (101...200) [mbar·l/(s·cm <sup>2</sup> )]	n/s	n/s	< 6E-13	< 3E-13	< 1.5E-13
	Aluminum, Copper	H <sub>2</sub> O [mbar·l/(s·cm <sup>2</sup> )]	n/s	n/s	< 2E-9	< 1E-9	< 5E-10
		C <sub>x</sub> H <sub>y</sub> (45...100) [mbar·l/(s·cm <sup>2</sup> )]	n/s	n/s	< 7E-12	< 6E-12	< 3E-12
		C <sub>x</sub> H <sub>y</sub> (101...200) [mbar·l/(s·cm <sup>2</sup> )]	n/s	n/s	< 6E-13	< 4.6E-13	< 2.3E-13
RGA certificate		no	no	Optional	Optional	yes	yes
Heavy metals	[at% at surface]	n/s	n/s	n/s	n/s	< 0.1	< 0.1
Particles **	[Surface cleanliness class]	SCC 100	SCC 10	SCC 1	SCC 1	SCC 1	SCC 1
Recommended for use in cleanroom class***		-	ISO 7	ISO 5	ISO 5	ISO 5	ISO 5
Cleanroom suitable packed		no	twofolded	twofolded	twofolded	twofolded	threefolded
Note		"free of oil and grease"	cleanroom suitable	vacuum suitable	low outgassing and low particle generation	Semiconductor Applications	Highest-End Technologies

\* hydrocarbons

\*\* Purity Class 1 – 4: SCC 1 or SCC 0.1 according to the customers request

\*\*\* Cleanroom compatibility better than ISO 5 according to the customers' request

The T&C of cleaning apply

Technical changes and errors excepted.  
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