

HiCube Neo RGA

Residual gas analysis systems



Safe

Integrated DigiLine full-range transmitter to monitor the total pressure and protect the filament

Flexible

Portable, extended range of accessories, e.g. different mass ranges, chamber heating, transport box

Compact

Integrated turbomolecular vacuum pump unit and mass spectrometer

Accessories

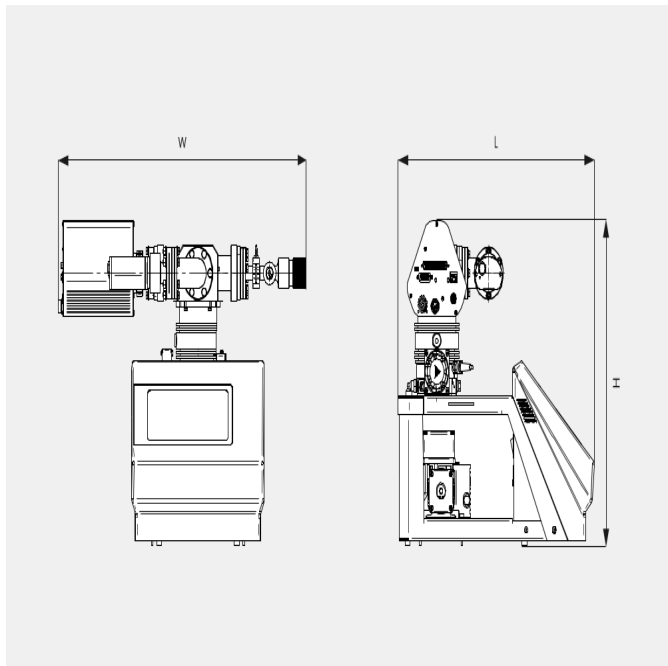
- Spare electronics
- Spare ion source
- Spare filament
- Spare analyzer
- Spare gauge
- Spare pumps or pump service kits
- Spare inlet valve
- Mass ranges
- Filament material
- Various backing pumps
- Various gauges
- Chamber heating
- Computer with Pfeiffer MassSpec software
- Shut-off valve
- Calibration gas option
- Transport box
- Mobile cart

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Dimensional drawing



Pumping speed

The following technical values refer to ISO Hz

	HiCube Neo RGA (QMG 250 F1)	HiCube Neo RGA (QMG 250 F2)	HiCube Neo RGA (QMG 250 F3)
Mass range	1 - 100 u	1 - 200 u	1 - 300 u
Detection limit	$4 \cdot 10^{-13}$ hPa (mbar)	$5 \cdot 10^{-13}$ hPa (mbar)	$7 \cdot 10^{-13}$ hPa (mbar)
Ar sensitivity	$5 \cdot 10^{-4}$ A/hPa (mbar)	$4 \cdot 10^{-4}$ A/hPa (mbar)	$3 \cdot 10^{-4}$ A/hPa (mbar)
Max. operating pressure	$5 \cdot 10^{-4}$ hPa (mbar)	$5 \cdot 10^{-4}$ hPa (mbar)	$5 \cdot 10^{-4}$ hPa (mbar)
Rod system	6 mm diameter, 125 mm length	6 mm diameter, 125 mm length	6 mm diameter, 125 mm length
Operating temperature analyzer	200 °C	200 °C	200 °C
Operating temperature electronics	5 - 50 °C	5 - 50 °C	5 - 50 °C
Bake-out temperature	300 °C (electronics removed)	300 °C (electronics removed)	300 °C (electronics removed)
Dimensions (L x W x H)	446 x 583 x 434 mm	446 x 583 x 434 mm	446 x 583 x 434 mm
Connecting flange	DN 16 ISO-KF / DN 40 CF-F*	DN 16 ISO-KF / DN 40 CF-F*	DN 16 ISO-KF / DN 40 CF-F*
Detector	Faraday	Faraday	Faraday

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	HiCube Neo RGA (QMG 250 F1)	HiCube Neo RGA (QMG 250 F2)	HiCube Neo RGA (QMG 250 F3)
Contribution to neighboring mass	< 10 ppm	< 20 ppm	< 50 ppm
Resolution at 10% peak height	0.5 - 2.5 u	0.5 - 2.5 u	0.5 - 2.5 u
Dwell time	1 ms - 16 s/u	1 ms - 16 s/u	1 ms - 16 s/u
Weight approx.	22 - 27** kg	22 - 27** kg	22 - 27** kg
Supply voltage	100 - 240 VAC	100 - 240 VAC	100 - 240 VAC
Interface	Ethernet	Ethernet	Ethernet
Reproducibility of peak ratio	± 0.5 %	± 0.5 %	± 0.5 %
Power consumption	max. 240 W without heating, max. 400 W with heating	max. 240 W without heating, max. 400 W with heating	max. 240 W without heating, max. 400 W with heating

The following technical values refer to ISO Hz

	HiCube Neo RGA (QMG 250 M1)	HiCube Neo RGA (QMG 250 M2)	HiCube Neo RGA (QMG 250 M3)
Mass range	1 - 100 u	1 - 200 u	1 - 300 u
Detection limit	$4 \cdot 10^{-13} / 3 \cdot 10^{-1\#}$ hPa (mbar)	$5 \cdot 10^{-13} / 4 \cdot 10^{-1\#}$ hPa (mbar)	$7 \cdot 10^{-13} / 5 \cdot 10^{-1\#}$ hPa (mbar)
Ar sensitivity	$5 \cdot 10^{-4}$ A/hPa (mbar)	$4 \cdot 10^{-4}$ A/hPa (mbar)	$3 \cdot 10^{-4}$ A/hPa (mbar)
Max. operating pressure	$5 \cdot 10^{-4} / 5 \cdot 10^{-\#}$ hPa (mbar)	$5 \cdot 10^{-4} / 5 \cdot 10^{-\#}$ hPa (mbar)	$5 \cdot 10^{-4} / 5 \cdot 10^{-\#}$ hPa (mbar)
Rod system	6 mm diameter, 125 mm length	6 mm diameter, 125 mm length	6 mm diameter, 125 mm length
Operating temperature analyzer	200 °C (max. 150 °C when operating with SEM) °C	200 °C (max. 150 °C when operating with SEM) °C	200 °C (max. 150 °C when operating with SEM) °C
Operating temperature electronics	5 - 50 °C	5 - 50 °C	5 - 50 °C
Bake-out temperature	300 °C (electronics removed)	300 °C (electronics removed)	300 °C (electronics removed)
Dimensions (L x W x H)	446 x 583 x 434 mm	446 x 583 x 434 mm	446 x 583 x 434 mm
Connecting flange	DN 16 ISO-KF / DN 40 CF-F*	DN 16 ISO-KF / DN 40 CF-F*	DN 16 ISO-KF / DN 40 CF-F*
Detector	C-SEM, Faraday	C-SEM, Faraday	C-SEM, Faraday
Contribution to neighboring mass	< 10 ppm	< 20 ppm	< 50 ppm
Resolution at 10% peak height	0.5 - 2.5 u	0.5 - 2.5 u	0.5 - 2.5 u
Dwell time	1 ms - 16 s/u	1 ms - 16 s/u	1 ms - 16 s/u

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	HiCube Neo RGA (QMG 250 M1)	HiCube Neo RGA (QMG 250 M2)	HiCube Neo RGA (QMG 250 M3)
Weight approx.	22 - 27** kg	22 - 27** kg	22 - 27** kg
Supply voltage	100 - 240 VAC	100 - 240 VAC	100 - 240 VAC
Interface	Ethernet	Ethernet	Ethernet
Reproducibility of peak ratio	± 0.5 %	± 0.5 %	± 0.5 %
Power consumption	max. 240 W without heating, max. 400 W with heating	max. 240 W without heating, max. 400 W with heating	max. 240 W without heating, max. 400 W with heating