

Residual Gas Analyzer (RGA)

Vortex Vacuum offers an affordable Residual Gas Analyzer, also known as an "RGA", without sacrificing performance, quality, or reliability. Few companies can boast a more detailed gas analysis than the Vortex V V unit. All systems include a multi-gauged quadrupole probe, a communications and control system, and a real time Windows® software package.

- All units come standard with Faraday Ion Detection
- 100, 200, and 300 AMU Systems
- Capable of Multi-Head operation
- Integrated Pirani and Ion Gauge
- Mass Spectra, Leak Detection, and Pressure vs. Time Modes
- Replaceable Dual Thoriated Iridium Filaments
- Better than 1 AMU Resolution



Ordering Information: (Just insert numbers or letters)

Example: V V 1 0 0 F E (This unit would be a 100 AMU unit with a Faraday & Electron Multiplier)

V V _____ (100, 200, or 300 AMU Package)

_____ (FI for only Faraday Ion Detector)

_____ (FE for both Faraday Ion Detector and Electron Multiplier Detector)

V V _____ is the part number of the unit. Call for pricing.

Mass filter type	Quadrupole
Resolution	Greater than 1 amu @ 10% peak height, adjustable
Operating pressure	Atmosphere to UHV (Pirani gauge reads up to 1 atmosphere, ion gauge operation below 10 ⁻² torr and RGA operation below 10 ⁻⁴ torr)
Partial Pressure Detector type	Faraday cup (Dual Faraday Cup/Electron Multiplier With XTx00M Units)
Partial Pressure Sensitivity (A/Torr)	5x10 ⁻⁴ into Faraday cup. Measured with N2 @ 28 amu with 1 amu full peak width, 10% height, 70 eV electron energy, 6 eV ion energy and 2 mA electron emission current.
Minimum detectable partial pressure	10 ⁻¹¹ torr. Measured with N2 @ 28 amu with 1 amu full peak width, 10% height, 70 eV electron energy, 6 eV ion energy, and 2 mA electron emission current. 10 ⁻¹⁴ torr for multiplier units.
Total Pressure Detector type >10⁻³ Torr	Pirani type, (measures heat loss from noble metal wire)
Total Pressure Detector type <10⁻³ Torr	Bayard/Alpert type ion gauge, x-ray limit 10 ⁻⁹
CCU Max. operating temperature	70°C
CCU temperature sensor	solid state sensor in CCU, temperature continuously monitored and displayed
Bakeout temperature	350°C (without CCU)
Probe operating temperature	100°C, Platinum RTD on probe, temperature continuously monitored and displayed
Ionizer Design	Open ion source , electron impact ionization.
Probe Materials	SS304, Kovar, Tungsten, Alumina, Iridium, Copper, Nickel
Filament	Dual Thoriated Iridium with firmware protection.
Degas	Built-in 1 to 30 W ramp-up.
Electron energy	40 to 150 V, continuously programmable
Ion energy	3 to 10 V, continuously programmable
Electron emission current	0.1 to 5 mA, continuously programmable
Probe mounting	Minimum tube I.D. 1.375" flange 2.75" CF
CCU dimensions	3.3" x 4.8"x 7.5". Easily separated from the probe for bakeout
Mass stability	±0.1 amu after 30 minutes warmup.
Computer interface	RS-232C, 9600 - 115,200 Baud
Software	Windows® 2000, XP based application.
Power requirement	24 VDC @ 2.1 Amps. Standard 120 VAC adapter supplied.
Weight	5 lbs.