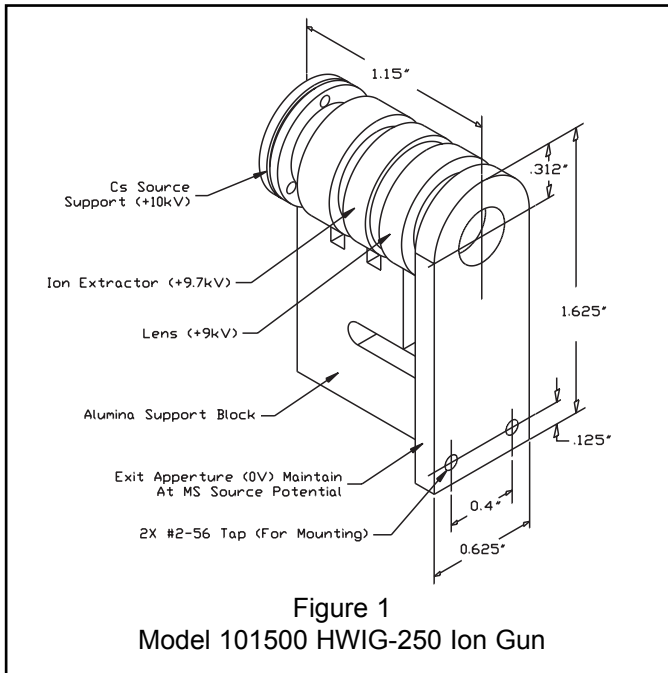


TB-171 Model HWIG-250 Ion Gun

HeatWave Labs offers several complete ion gun and power supply units designed for Mass Spectrometer and other similar applications. Cesium is the most common ion type but other Alkaline ion types are available. See TB-118 for information on ion source types available.



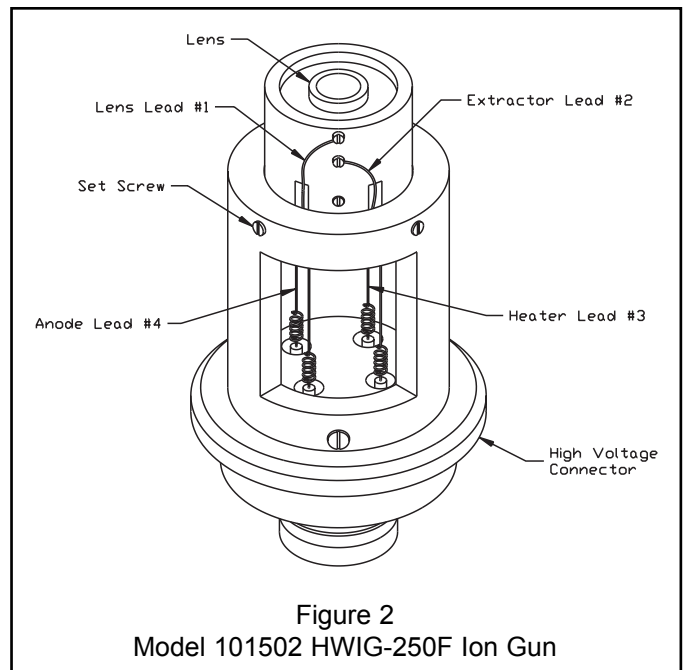
The Model 101500 HWIG-250 Ion Gun is a complete ion gun assembly (Figure 1). This is supplied with a Cesium (or other type) source pellet already installed and is designed to be mounted within a vacuum chamber or instrument. The gun is capable of producing a 10 KeV ion beam of over 1 microamp (Cs) focused to a spot size of less than 1 mm² at a distance of 2.5 cm from the exit aperture. Replacement Cs sources, #101141, are available separately. Other ion types are available with source #101139 (use with adapter kit #101504).

The Model 101500 HWIG-250 will operate with the Model 101501 HWIGPS-4 Power Supply. The supply permits "floating" the gun at up to 10 KV and will provide 15KeV of energy.

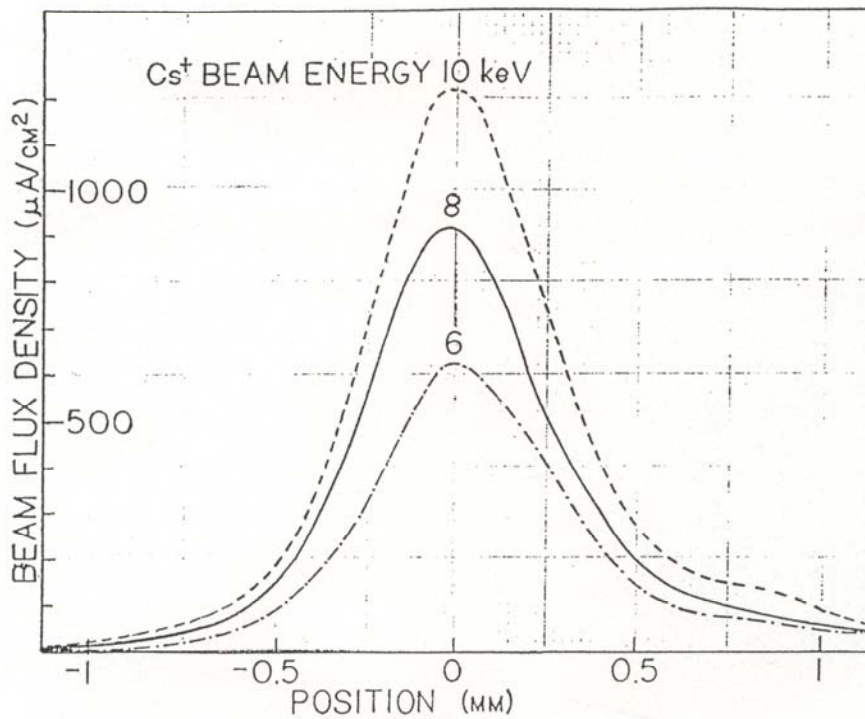
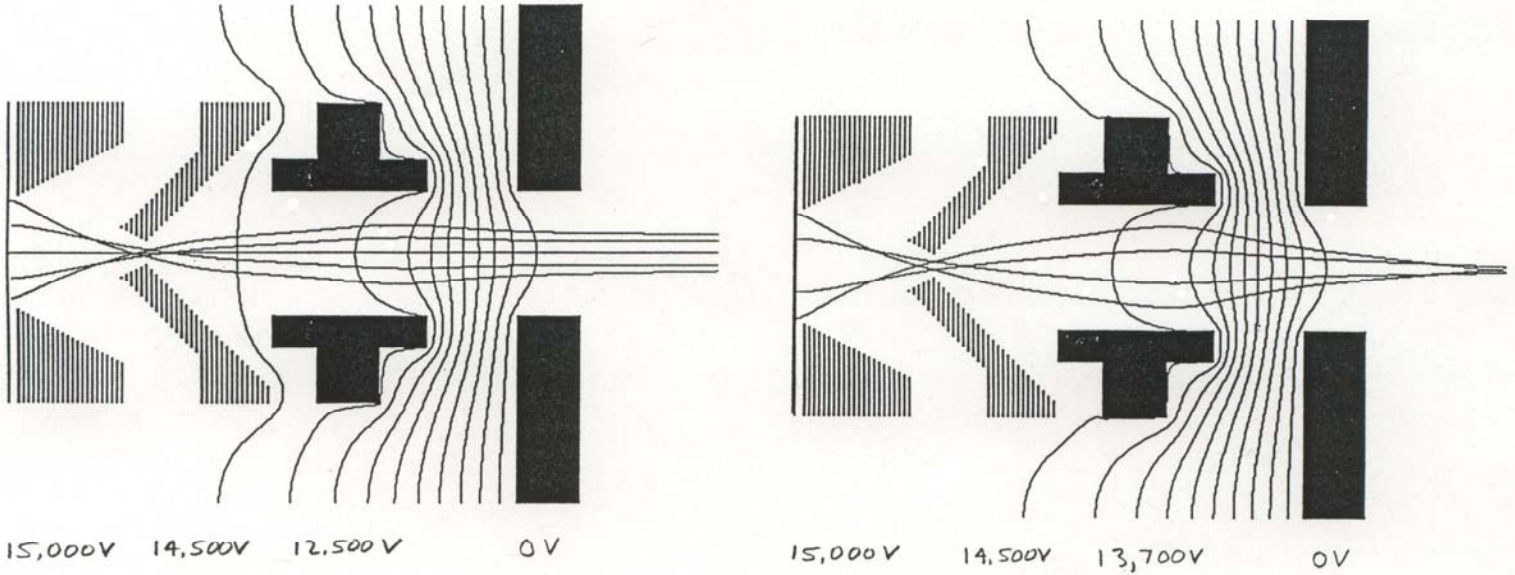
Designed specifically for a Quadrupole Mass Spectrometer, the Model 101502 HWIG-250F Ion Gun (Figure 2) is similar to the HWIG-250 but is designed with a vacuum flange mount. The matching Power Supply is Model 101503 HWIGPS-5 or -4.



Design modifications including alternate ion species or higher beam currents are available. Consult the factory for details.



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Cs⁺ Beam Cross Section obtained at 3 cm from exit aperture using a $\varnothing 0.25$ mm defining aperture on the detector.

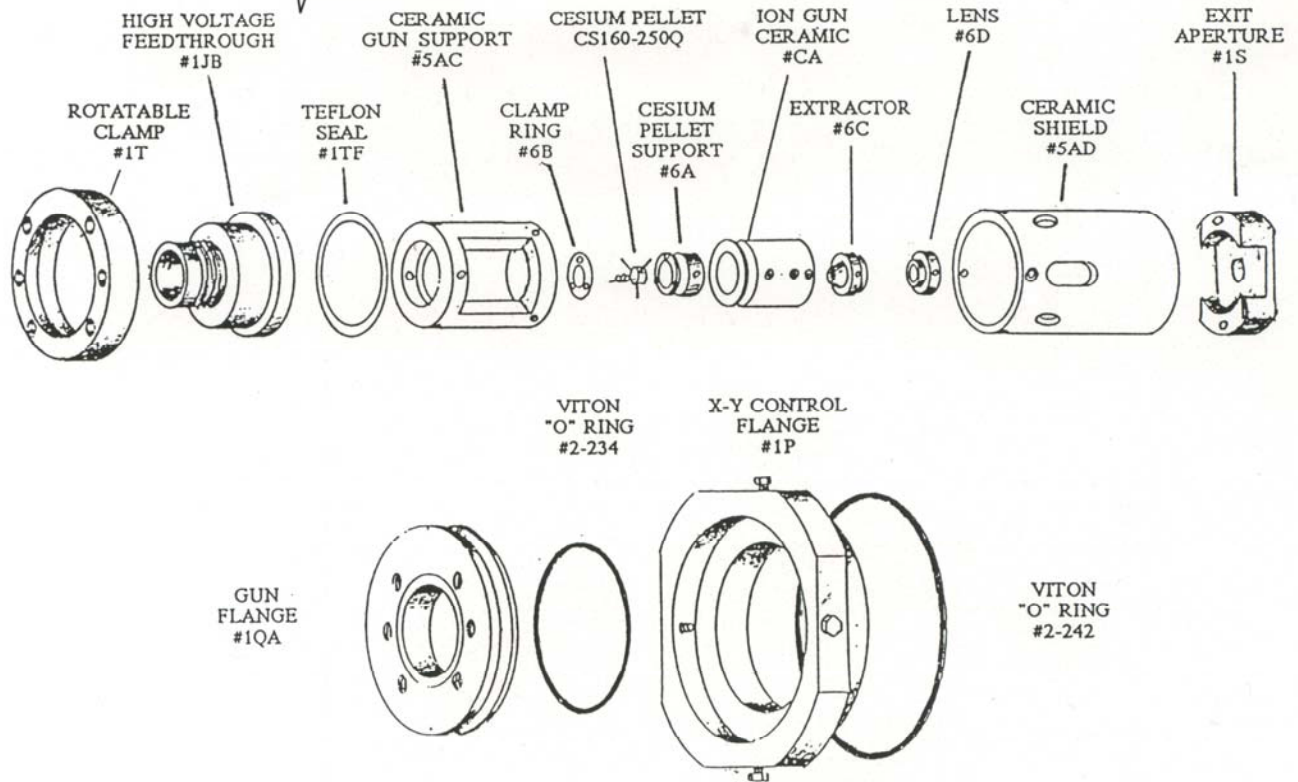


Figure III
HWIG-250F Component Layout

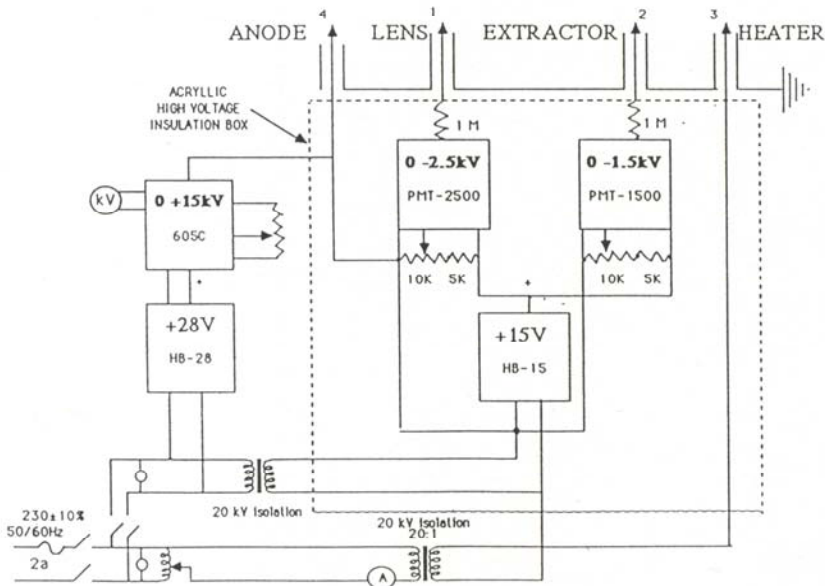


Figure IV
HWIGPS-5 Circuit Diagram for QMS