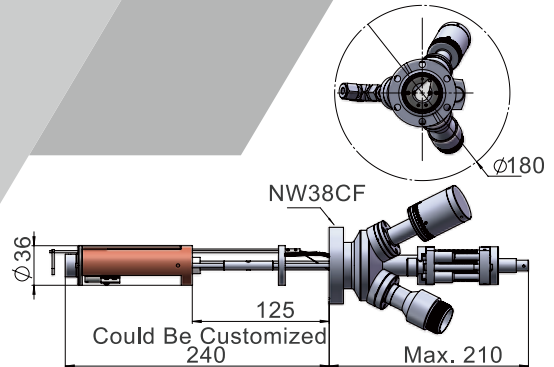


# E-Beam Evaporator



Part Number **EBS38**

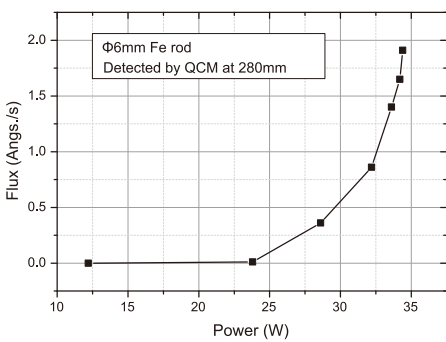


Effusion Cells with different configurations have proven their capability in evaporating most elements in a controllable and stable manner. However, there is still limit on the effusion cells, with the wired filament design, the highest temperature one could achieve is around 2000°C which has pushed the tungsten filament to the limit. This is still below the evaporating point of many refractory metal such as Ta/ Mo et al.

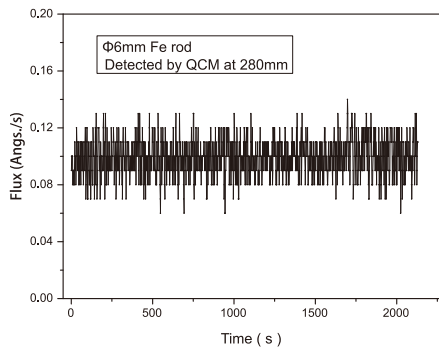
The e-beam evaporator pushed the highest working temperature to around 3400°C by electron bombardment from the surrounding filament to a rod form material or crucibles.

The heated zone is enclosed in a water-cooled copper shroud which keeps the degassing in a very low level. By tuning the input power from 0 to 300W max, flux control from < 0.1A/ min to >50A/min is achieved for many materials. A 50mm stroke linear translator is fitted with the evaporator to support the movement of rod material and guarantee the rod tip always in the optimized position.

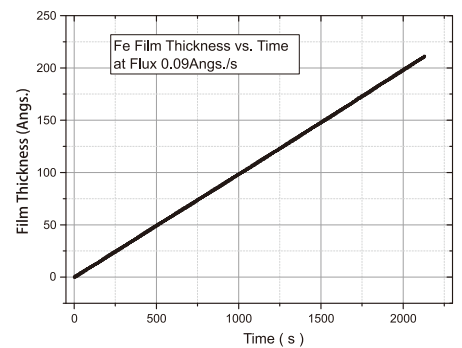
Fe Flux Test



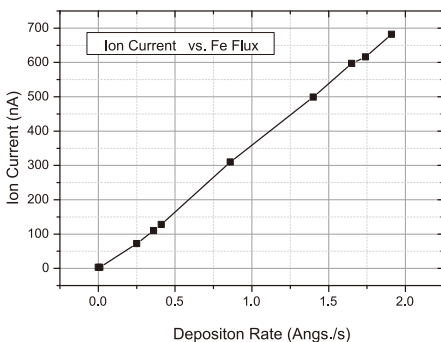
Fe Flux Stability Test



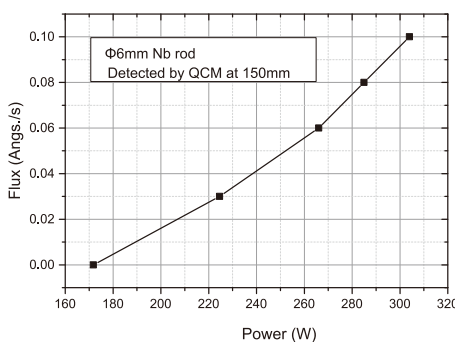
Fe Film Thickness Test



Ion current vs Flux Test



Nb Flux Test



Nb Flux Stability Test

