

## Sample Introduction

### *Sample Holder*



### *Sample Holders, Masks, and Clips*

Samples must be attached to a sample carrier before being introduced into the chamber. The standard PHI5000 sample carrier is 2.5cm in diameter and is capable of holding samples up to but not exceeding 7mm in height and 15mm in diameter. Samples can be affixed to the sample carrier using various methods such as a molybdenum mask, screws, and clip arms. Silver paste or copper foil, carbon tape may be used for attaching extremely small samples.

A recessed sample carrier may be used as an option for mounting thick samples. The sample is placed into the hollow of the sample carrier and affixed using the same methods as described above.

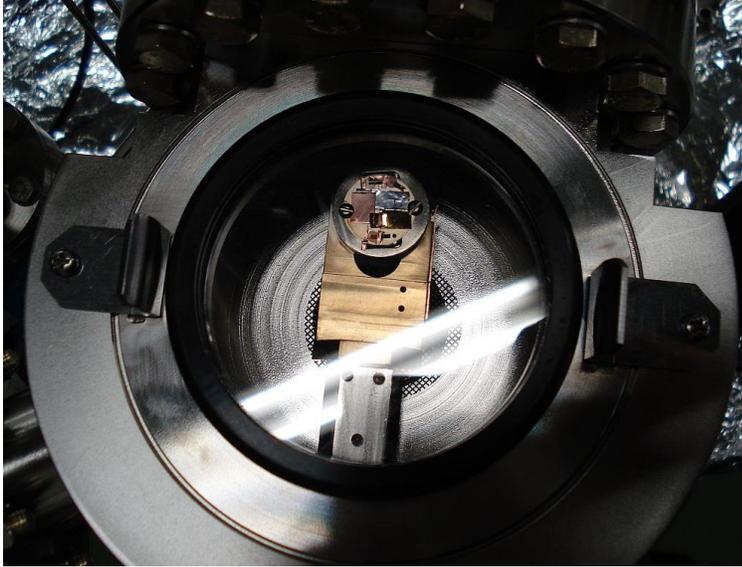
### *Magnetic Transfer Rod*



### *Magnetic Intro Rod*

A single sample carrier can be transferred in and out of the analysis chamber using a magnetically coupled transfer rod, also referred to as the transfer arm. The transfer rod is designed to have a high decoupling force for easy sample transferring, and to be operated in UHV systems.

## *Introduction Chamber*



### *Intro Chamber*

Samples cannot be transferred directly from atmosphere to the analysis chamber. Therefore, samples are first placed into an introduction chamber. The introduction chamber is then pumped down to a suitable high vacuum, after which the sample is transferred into the analysis chamber using the transfer rod.

### **CAUTION:**

**Vacuum contamination may have a detrimental effect on the performance of the system. Do not introduce into the vacuum chamber any magnetized object, a liquid (or substance which evaporates in a vacuum), or any granular material (or any sample capable of excessive gas discharge). Samples being introduced into the vacuum chamber including the sample carrier should be handled using clean room gloves. All tools (e.g., tweezers, drivers, etc.) which are used to handle the samples should be degreased and demagnetized.**