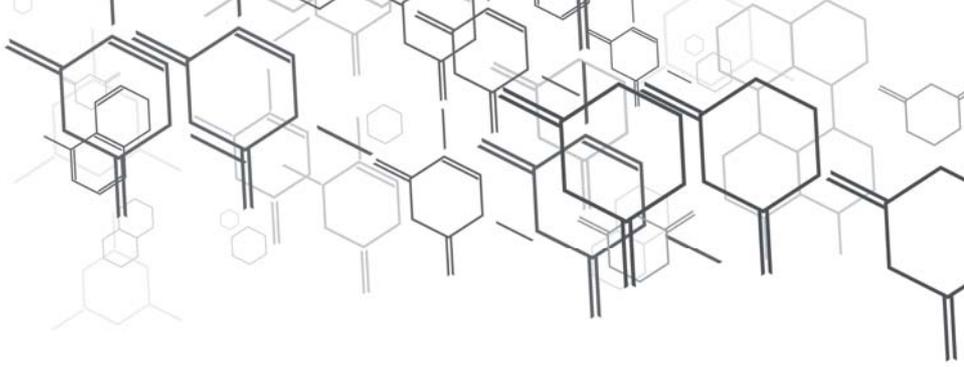
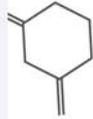


SEM/TEM/FIB



Scanning /Transmission Electron Microscopes (SEM/TEM) are sophisticated equipments having at their heart a very delicate and expensive electron emitter. The electron emitter is very sensitive to gas contamination. Its performances, as well as its usable life, do depend on the vacuum level around it. Better performances and longer usable life are ensured by improving the vacuum in the gun area.



NEG pumps can be easily mounted close or inside the gun area to tremendously boost vacuum level around the emitter. Thanks to the much compact package, compared to other type of UHV pumps, they allow a significant reduction of the weight and volume of the pumps.

This translates into direct benefits for the SEM/TEM in term of less vibration, simplicity of assembling and transportation.

The much smaller size of the NEG pumps also allows improving the design of the equipment. In fact less space can be left to the pumps and more space remains available to fit new instrumentations, devices or other features which provide

added value to the equipment.

Focused ion beam (FIB) systems, as well as semiconductor tools for wafer inspection and revirew are also benefiting from the use of NEG pumps.

An additional feature of NEG pumps is the fact that they do not need power to operate. This means that they can continuously pump the SEM/TEM equipment even during the transportation, when all the other type of pumps are off. The microscope remains therefore under UHV conditions during transportation and it can be quickly put into operation at the customer's facility, without any additional bake out of long pump down procedures and reducing the field engineer service time.

This saves money to the customer and the SEM manufacturer and also makes the start up process much faster and cleaner.

Different types of standard NEG pumps, like the Capacitorr and NEXTorr, are already proposed in this application. Customized designs are also possible.

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