NEW! Ultrasonic Bonding
PERFECT FOR ELECTROPLATED & STUD BUMPS SUCH AS AU TO AU BONDING

The Digital Ultrasonic Generator is used for ultrasonic bonding of components in the semiconductor industry. It was developed as an option for the Air-Vac ONYX29DB (Die Bonder) module and can also be used with the ONYX500 Series systems. It is perfect for electroplated and stud bumps such as Au to Au bonding.

This 8-bit Digital Ultrasonic Generator (by F&K), operates with a frequency range of 40 to 150kHz with a maximum power of 12.5W.

Relevant parameters of time, power, force and temperature can be entered directly into the ONYX VisualMachines™ software. The frequency is determined and controlled by the Ultrasonic Generator.

A constant bonding process results from a repeatable resonance frequency of the bonding tool, which can only be achieved with a stable fixture of the transducer and the bonding tool. The transducer FK090Z (by F&K), with a resonance frequency of 90kHz, is clamped in an adapter which is mounted at the machine head using the standard nozzle cone. The screws for mounting the transducer and the bonding tool are torqued with a specific force.

The bonding tool/vacuum nozzle is connected to the nozzle vacuum, so the components can be picked, aligned using the vision unit and placed prior the bonding process without tool change.

The lower heater platen provides bottom heat (typically 100-150°C) to the substrate surface.