



**INDIAN INSTITUTE OF TECHNOLOGY BOMBAY**  
**MATERIALS MANAGEMENT DIVISION**  
**Powai, Mumbai - 400076**

### **Technical Specifications :**

#### **Wedge Wire bonder**

- Must be able to perform thermosonic Wedge-Wedge bonds. Ball bonding is not a necessity.
- Minimum requirement is full manual operation with "mouse type" control of X-Y position and a Z-lever.
- The instrument must be able to operate as a standalone unit without the need of compressed air or other gas lines.
- The instrument should have capability for setting different sets of parameters for first and second bonds.
- Bonding time of upto 1 second.
- Power of at least upto 5 watts.
- Sample holder stage must be at least 60mm in diameter and must have adjustable clamps to hold chip carriers of various sizes including LCC20 and PCBs upto at least 30mm width. Heated sample holder is not a necessity.
- Instrument must have a front panel/display which can show the force, power and bond times. All these 3 parameters should be configurable from the front panel without using any other additional accessory.
- A vertical access of approximately 2cm or more.
- Stereo zoom optical microscope (binocular) of make Leica/Nikon/Olympus and zoom of upto at least 60x must be provided. A camera/ electronic screen is not a necessity for viewing bonds/chip.
- Must have capability of bonding 17 and 25 micrometre Aluminium wires. Ribbon bonding is not a necessity.
- Flexible fibre optic illuminator to direct light onto the sample stage must be provided with white light LED illuminators.
- 240 V, 50-60Hz operation without requiring extra step down transformers etc.
- 300 metres of 25 micron spool (or suitable alternative of 300m length) of Aluminium wire, must be provided.
- At least 5 spare wedges, and accessories including suitable wires to clean wedge hole, torque wrench, necessary spare screws, allen keys, force calibrator (if required) etc. must be provided.

Alternatively, If there is a standard service/accessory kit, it should be provided with the equipment.

- Installation and demonstration in IIT Bombay must be done.

Automation/ large throughput/ very fast cycle times are not primary requirements. Simplicity of operation with basic features and robustness is required.