



## IMPULSE STAKING SPEC SHEET

Impulse Staking is a process that creates heat on-demand for staking plastic bosses of various sizes. The process is perfect for sensitive electronics and parts where excessive heat and pressure may cause damage to visible areas. At the end of each cycle, tips are cooled to room temperature within seconds preventing accidental operator injury and eliminating the need for constant heating. During the staking process, a solid or hollow "boss," or tab, protruding through a mated part is heated to a softening temperature and formed to a head that captures the mated part.

Unlike heat staking and ultrasonic welding, Impulse Staking applies much less pressure on the part and provides a clean and string free method of staking. Impulse Staking is a proven process that once setup, requires little to no maintenance.

## IMPULSE STAKING

### SYSTEM OVERVIEW

- Eliminates “A” side part marking and suitable for most prepainted assemblies
- Safe for sensitive electronic components – ideal for attaching circuit boards to plastic parts
- Multi-stage heating control – heats to form boss and whetting pulse for clean, string-free release
- Compact impulse tip and thruster footprint allows for welding of densely packed bosses
- Specialty tips for hollow, “X” and blade boss configurations available on request
- Highly efficient heating on demand – no need for continual heating, as in traditional heat staking
- Eliminates elastic recovery of formed boss due to instantaneous cooling of tip following impulse heating cycle(s)
- Stakes most filled plastics as well as chromed and metalized bosses
- Durable, non-stick coating available for highly abrasive plastics
- Sensors verify weld to depth/weld complete
- Can be used with interchangeable nesting/shell machines
- Fully independent heating and cooling control for each tip via HMI
- Quick-change impulse tip replacement
- Virtually eliminates stringing by whetting the formed boss with a brief pulse prior to release
- Far less expensive than ultrasonics and infrared systems
- Eliminates the hassles of tip wear, stringing, cartridge failure and maintenance associated with heat staking



Need help with Impulse Staking applications?  
Contact us for more information.