



FOTROS

Technical and Engineering Company

www.ultrasonic.fotrosco.ir

Ultrasonic Welding



Ultrasonic Welding

is a process that uses high-frequency mechanical vibrations (typically between 20 to 40 kHz) to create friction and local heat between two components. This heat is sufficient to melt the surfaces of the parts slightly and bond them together, without causing the entire piece to deform or be damaged. In simple terms, an ultrasonic welding machine acts like a "very fast hammer" that locks the molecules of two surfaces together with tiny, powerful vibrations.

Key Features:

- High speed
- High accuracy
- Cost reduction
- High performance
- High safety
- High connection quality
- Costumized Horn`s shape
- User friendly HMI
- Adjustable power
- Computer software connectivity



Power (Watt)	Frequency (KHz)	Model
2000	20	UW01
2600	15	UW02
4200	15	UW03

Key Applications:

Automotive Industry:

- Plastic part bonding
- Production of automotive filters
- Rapid and robust assembly of components

Medical Industry:

- Welding of delicate parts without contamination
- Application in disposable medical equipment
- Manufacturing of medical masks, respiratory filters, and sterile equipment

Electronics Industry:

- Connection of thin wires and cables
- Assembly of circuits and small components
- Increased accuracy and reduced waste

Packaging Industry:

- Nylon welding, packaging films, and plastic containers
- Creating robust and secure packaging without the need for adhesive

