

# Ultrasonic Hand Welding Machine



An ultrasonic hand welding gun is a handheld device that uses ultrasonic vibrations to weld two pieces of material together.

The Ultrasonic hand welding guns (UHG-35-1000) are typically used for welding plastics, but they can also be used to weld other materials, such as metals and ceramics. The Ultrasonic hand welder is ideal for small welding, rivetting and inserting operations using thermoplastic materials; where the manual assembly is required. The very compact instrument is suitable for small and low volume applications.

These hand guns are versatile and efficient tool that can be used to weld a variety of materials. They are a good choice for applications where a strong, durable weld is required.

## Technical Specifications

Frequency	20 kHz, 35 kHz	Weight	0.6/1.2
Generator	AHG-35-500/1000 AHG-20-1000	Generator (Kg)	15
Ultrasonic O/p Power (W)	500/1000	Amplitude	Constant Amplitude
Dimension Press	Dia 54x220	US Welding Time	0.001 to 9.999 Sec.
Generator (WxDxH)mm	500x350x220	Main Fuses	3.15A (5*20 mm)
Input Supply	230 VAC ( $\pm 10\%$ ) & 50 Hz	Generator Fuse	4 Amps + 10 Amps (5*20 mm)

## System Consisting of :

- Ultrasonic Generator - UHG-1000W-35 KHz
- Hand Gun
- Sonotrode/ Horn - Titanium/ Aluminium



## Features

- Digital Display of Welding parameter & system performance
- Automatic frequency calibration for various Horns / Sonotrodes
- Frequency Indication on Display
- Horn Life indication on Display
- Overload Protection Fuse circuit
- Easily upgrade modular design
- Power Consumption on display for each welding, for analyzing consistency on welding.
- Long life of consumables – Due to precise timing you don't overload the consumables also the life of the horn, converter and electronic parts is also increased.
- Welding Modes : 2 Modes
- **Auto Mode** – Welding can be performed in two operation modes, with weld time adjustable from 0.001 seconds to 9.999 seconds.
  - **Constant Energy Mode:** We can fix the energy to be consumed for the welding, and the system welds each & every part with similar energy.
  - **Constant Time Mode:** We can fix the welding time with 0.001 Sec. accuracy, and each part welds with similar weld time, ensuring consistent welding.
- **Manual Mode** – Ultrasonic can be turned on as per requirement, by press of the start lever.



## Sonotrodes

An acoustic tool designed to have a specific longitudinal natural resonant frequency which transfers sound energy to the plastic part. Every Plastic welding job needs the welding tool specially made to required specifications. So also the fixtures. RTUL designs horns of perfect profiles, machined out of the right alloy for longer life and for efficient transmission of ultrasonic power to the welding spot. Developing of custom made horns, is our speciality.

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