

HOW IT WORKS

The ultrasonic generator converts the 50Hz mains signal to a 20kHz or 35kHz signal, when applied to the ultrasonic transducer in the press or handgun, this is converted into mechanical vibrations. These vibrations are amplified by a mechanical device called the booster and transmitted to the horn. The horn is an acoustic tool specially tuned to vibrate at the system frequency and shaped to fit the part to be welded. When the horn is applied to the part under pressure, the vibratory energy is transmitted to the joint area. This causes the two halves of the part to vibrate together resulting in heat through friction which melts the plastic at the joint only. When this molten state is reached, the vibration is stopped and pressure maintained briefly while the plastic solidifies. Cycle times are usually less than one second and weld strength approaches that of the material.

ULTRASONIC WELDING EQUIPMENT



Thermosonics offer ultrasonic welders in both 20 and 35kHz to meet all your plastic welding needs.

Our range of bench welders includes the K20E economy welder and the robust USM series. The USM welders are available from 800W to 4kW with optional levels of microprocessor control and a wide range of accessories including linear encoder, weld energy control, sliding table and standard or acoustic guarding.

The **Cobra and Viper** 20kHz and 35kHz range of generators, converters and actuators are available separately for adaption to bespoke machinery. This range of generators and converters is an extremely reliable and powerful range of ultrasonic equipment.

Its features include **Auto-Tune, Variable Amplitude, Soft Start, Automatic Overload Protection and Remote Control and Monitoring Facilities.**

This range is also available with optional **microprocessor control** and **RS232** interface.



The **H35-05 Hand-held Welder** is an inexpensive and versatile tool ideal for jobs such as welding large or difficult parts, spot welding, prototyping work and small series production.

THERMOSONICS
Unit 12A Queniborough Industrial Estate
Melton Road, Queniborough, Leicester, LE73FP
Tel: 0116 269 8833 Fax:0116 264 0200
E-Mail: info@thermosonics.co.uk
Web: www.thermosonics.co.uk