



SONICS®

Sonics & Materials, Inc.

new

Models 4095/4096

40 kHz

Ultrasonic Plastics Welding Systems

**more Power
Features**



Model 4095
Welding Press



GX-Series Power Supply

new Power	Now available in: ■ 400 watts ■ 800 watts
new Features	<ul style="list-style-type: none"> • Digital Amplitude Control • Ultrasonic Horn/Stack Frequency Display • Good Part/Bad Part Output Signal • 30% Smaller Power Supply Footprint
new Models	<p>Weld by: digital time - Model GXT digital time and/or constant energy - Model GXE digital time, constant energy and/or distance - Model GXL*</p> <p><i>*Requires optional linear encoder</i></p>

STANDARD FEATURES INCLUDE:

- Automatic Frequency Tuning
- Multiple Job Storage
- Digital Force Triggering
- Calibration Pulse Prior to Every Weld Cycle
- Back-Lit LCD Display
- Ultrasonics Load Meter Scale
- Upper and Lower Weld Limit Settings
- RS232 Serial Port Printer Output
- Optional PLC I/O (Input/Output) Ports
- Soft Start Overload Protection Circuitry
- Load Regulation Circuitry
- Distance Mode Settings in English or Metric Units (with optional linear encoder only)

Leaders in the field of ultrasonic plastics welding equipment and technology since 1969, Sonics & Materials offers its new line of **GX-Series** ultrasonic power supplies, combined with 40 kHz welders, to provide a fast, precise process for delicate assemblies that require mild ultrasonic horn vibrations.

The new GX-Series, available in 400 and 800 watts, provides microprocessor control and consistent reliability for every application. Power supplies feature smart-logic, user-friendly keypad navigation and are available in three different welding mode configurations for maximum versatility and flexibility.

Power Supply

Dimensions: 15.25" W x 6.50" H x 18.75" D
(387.3 x 165.1 x 476.25 mm)

Weight: 21 lbs. (9.5 kg)

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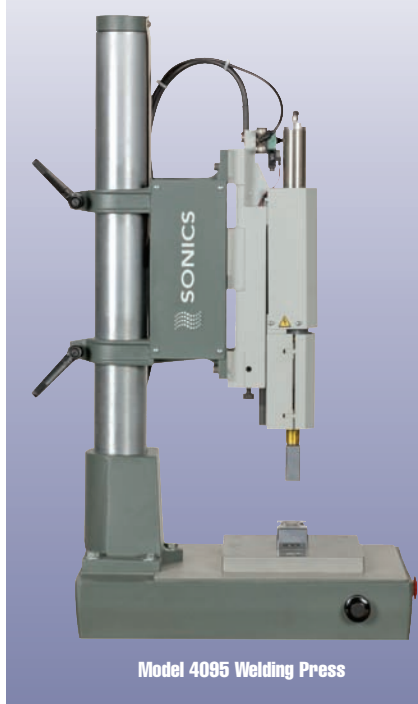


For more information: **1-800-745-1105 • www.sonics.com**

40 kHz Ultrasonic Plastics Welding

Welding Stands and Assembly System Configurations

Sonics' standard 40 kHz ultrasonic welders are configured as bench top units or slimline actuators for special automated machinery integration. Ultrasonic "stacks" (converter/booster/horn) are also available for special machinery integration and where multiple RF sequencing stations are required.



Model 4095 Welding Press

The 4095 Welding Press is a bench-top unit with a rigid cast aluminum base, dual, non tie down, anti-repeat palm buttons, and emergency stop. The press has adjustable pressure triggering and an adjustable positive stop. For greater operational flexibility, the power supply can be remotely positioned up to 35 ft. (10.6 m) from the welder.

Model 4096 Slimline Actuator

Designed for use in automated assembly systems, the Slimline head can be mounted in any position on a bridge or other structural member. The welding head is guided on precision linear roller bearing slides and can be matched with all of Sonics' power supplies including models GXT, GXE and GXL.

Optional Linear Encoder

For more precise weld depth control, an optional linear encoder is available on either the model 4095 press or 4096 slimline actuator with depth of weld accuracy of ± 0.001 " (0.025mm)

For extremely high precision, close tolerance depth of weld applications, Sonics' ElectroPress™ with stepper motor drive and GXE power supply is recommended. To find out more about the ElectroPress™ call to request a brochure or visit our web site (specific link for the brochure is: <http://www.sonics.com/pa-ultra-ep.htm>).

40 kHz Welding Overview

Ultrasonic welding at 40 kHz is particularly suited for smaller, precision plastic assembly applications that require gentler action. The tooling of 40 kHz welders is one-half the size of units operating at the more common 20 kHz frequency range. This results in a lower amplitude of horn vibration and consequently less stress on the parts being assembled.

The gentler action of 40 kHz ultrasonic welding is fast, precise and virtually inaudible. 40 kHz welders and components are smaller in size and are more readily accommodated where space is at a premium in automated assembly systems.

Typical assembly applications using 40 kHz ultrasonic welders include microelectronic components, printed circuit boards, high-precision assemblies such as intricate medical devices, and plastic parts in which class "A" surface marking is undesirable.

40 kHz is also well suited for ultrasonic staking or riveting, where the controlled flow of the molten plastic is used to capture or retain another component, usually of a dissimilar material.

All of Sonics' 40 kHz ultrasonic welding equipment can be configured to meet the particular requirements of a wide range of applications.



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