

P100R

ULTRASONIC

WELDING

SYSTEM

Operation & Maintenance Manual



ULTRASONICPOULTRYSYSTEMS.COM



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ATTENTION: This manual and the engineering information it contains, is proprietary and is provided to our customers for the sole purpose of operating and maintaining the Ultrasonic Poultry Systems equipment it describes. This is not to be given or made available to anyone who might use this information to the detriment of any entity of Ultrasonic Poultry Systems.

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INTRODUCTION

The model P100R is a portable 40 kHz, 100 watt hand held Ultrasonic Welder used for plastics assembly. It consists of an ultrasonic power supply and a hand gun. These units are designed specifically for welding, staking, and spot welding applications.

OVERVIEW OF ULTRASONIC WELDING SYSTEM

WHAT IS ULTRASONICS?

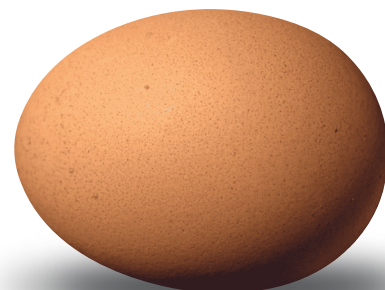
Ultrasonics refers to vibrational waves with a frequency above the human audible range which is usually above 18,000 cycles per second (HZ),

ULTRASONIC WELDING

The basic principle of ultrasonic assembly involves conversion of high frequency electrical energy to high frequency mechanical energy in the form of reciprocating vertical motion which, when applied to a thermoplastic, generates frictional heat at the overlapping belt interface. In Ultrasonic Welding, this frictional heat melts the plastic, allowing the two surfaces to fuse together in ultrasonic staking the controlled flow of molten plastic is used to capture or lock another material in place.

ULTRASONIC HAND-HELD WELDERS

Ultrasonic hand held welders are generally composed of the following major elements: a power supply, hand gun (transducer), and tip (also referred to as a hom) as detailed in the diagram on the next page. A review of this diagram will help you understand the basic elements involved in the assembly process and their relation to each other.



WELDER SPECIFICATIONS

Power requirements

110-240 VAC

Output frequency

40 KHz

Amplitude Range

Adjustable by tip design

Dimensions

10.62" x 9.68" x 4.87"
(27 x 24.6 x 12.4 cm)

Power supply weight

6lbs (2.7Kg)

Handgun weight

8oz (0.25kg)

Cable length

6' (1.8m)

Start button

Activates the ultrasonics

Nose cover

Always install nose cover before
using handgun

Tip installation

Prior to installation, ensure the mating surfaces of the tip and transducer are clean and free of debris. Make sure the M6x1.0 mm stud is tight in the tip (30-35 in/lb). Always use open the end wrenches on the wrench flats. Make sure the tip is tight to the transducer. Improperly tightened tips will lead to incomplete welds and premature welder shutoff.



IMPORTANT SAFEGUARDS

Read before installing or using the equipment

Your Ultrasonic Welding system has been designed with safety in mind. However, no design can completely protect against improper usage, which may result in bodily injury and/or property damage. For your protection and equipment safe-guard. observe the following warnings at all times, read the operating instructions carefully before operating the equipment, and retain this instruction manual for future reference. If the Ultrasonic Welding System is used in a manner contrary to that specified in this instruction manual, the protection features designed into the unit may be impaired.

- High voltage is present in the power supply. Do not remove the cover. Refer all servicing to qualified service personnel. Removing the cover may void the warranty.
- Never operate the power supply unless it is connected to the hand gun (convener).
- Never secure anything to the tip



INSTALLATION

Inspection

Prior to installing the Ultrasonic Welding System, perform a visual inspection to detect any evidence of damage, which might have occurred during shipment. Before disposing of any packaging material, check it carefully for small items.

The Ultrasonic Welder System was carefully packed and thoroughly inspected before leaving our factory. The carrier, upon acceptance of the shipment, assumed responsibility for its safe delivery. Claims for loss or damage sustained in transit must be submitted to the carrier.

If damage has occurred, contact your carrier within 48 hours of the delivery date. DO NOT OPERATE DAMAGED EQUIPMENT. Retain all packing materials for future shipment.

Electrical Requirements

The Ultrasonic Welder requires a fused, single phase electrical outlet capable of supplying 60 Hz at 110 volts or 220 volts. Contact Ultrasonic Poultry Systems for the right plug for your region.

Safety

Operating the equipment with voltages different from those specified, or with voltages with high power transients, will cause components within the power supply to fail.

Preparation for Use

1. Connect the converter cable to the power supply.
2. Plug the electrical line cord into the electrical outlet, and press the power button.
3. If the converter/tip assembly is not already assembled; screw the tip into the converter and secure with wrenches provided.
4. The following pages show standard tip. Custom tip are available to suit your needs.

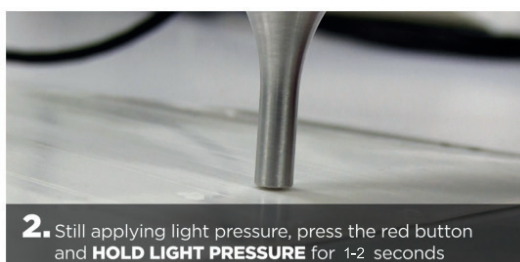


QUICK START INSTRUCTIONS

Getting started/How to Use

1. Place the tip onto the belt to be welded and apply light pressure.
2. Still **applying light pressure**, press the red start button and **hold light pressure** for 1-2 seconds.
3. Release the switch and **apply higher pressure** - hold for 1-2 seconds to allow weld to cool.

DO NOT PRESS HARD!
Excess pressure will result in a poor weld.



TROUBLESHOOTING

A. System is not welding

- I. Verify system is plugged in (110-240VAC)
- II. Verify power switch is on is light illuminated.
- III. Confirm tip is properly tightened.
- IV. Pressing too hard.
- V. Check tip-is-tip worn?
- VI. Allow tip to cool

If you are still having issues, please call Technical support at 614.549.0627

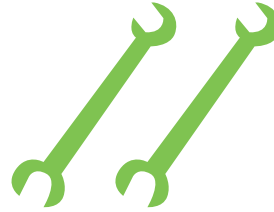


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ACCESSORIES (included)

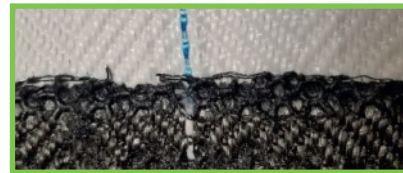
Two wrenches (9/16, 11/16)



STANDARD TIPS (Sold separately)



E20



Woven Egg Belt



H6

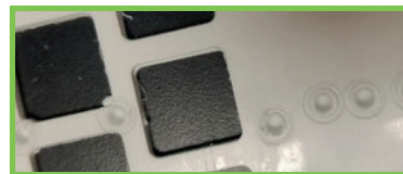


Manure Belt

1.0mm to 1.5mm



M30



Perforated Egg Belt

1.6mm - 2.0mm

OPTION P150 Travel Case



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WARRANTY GUARANTEE

Ultrasonic Poultry Systems warrants its products for a period of one year from the date of shipment against any defect in material or workmanship under normal installation, use and maintenance as described in the operating instructions. Labor is provided under warranty for a period of six months from the date of purchase.

During the warranty period, Ultrasonic Poultry Systems will, at its option either repair or replace without charge for material and labour, the part(s) which prove upon our examination to be defective, provided the defective unit is returned to us properly packed with all transportation charges prepaid. If the purchaser describes Ultrasonic Poultry Systems desires to come to their facility for warranty work and/or production debugging, the purchaser will be billed on time and expense basis. Any alteration and modification of the machine by the customer without prior written approval by Ultrasonic Poultry Systems will void all warranties. Ultrasonic Poultry Systems will not exceed the manufacturers warranty on any purchased components.

All tooling and ultrasonic tips are warranted for a period of one year. Ultrasonic Poultry Systems will repair or replace cracked or defective tips and tooling once without charge, If the failure occurs during the warranty period.

Note: The warranty will not cover normal and expected wear on tooling and tips. Any equipment judged by Ultrasonic Poultry Systems personnel to have been worn out by normal use, will not be replaced under the warranty conditions.

Ultrasonic Poultry Systems reserves the right not to warrant horns of unusual or experimental design which in our judgment are likely to fail during use.

Ultrasonic Poultry Systems equipment is designed for maximum operator safety and includes built-in safety devices. Any modification of these devices will void the warranty. Ultrasonic Poultry Systems assumes no responsibility for damages or injuries resulting from the modification of said safety devices.

The warranty does not apply to equipment which has been subjected to unauthorized repair, misuse. Abuse, negligence or accident. Equipment that In our judgment shows evidence of such damage will be ineligible for service under this warranty.

Under no circumstances shall Ultrasonic Poultry Systems be liable to the purchaser or to any other person for any Incidental or consequential damages or loss of profit or product resulting from any malfunction or failure of this Ultrasonic Poultry. Systems product. Due to the wide range of machinery and equipment provided by and produced by Ultrasonic Poultry systems, there are a few exceptions to this warranty. These exceptions will be handled on a case-by-case, based on the merit of the exception and the conditions of the operation of the machinery in question. To arrange for an exception to the warranty, present all information in writing to Ultrasonic Poultry Systems and it will be taken Into consideration.

RETURN INFORMATION

An RMA number is required to return equipment to Ultrasonic Poultry Systems.

Contact Ultrasonic Poultry Systems at:

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