

## Servo-Controlled Hot Plate Welder



Model HPS 152/152

### General Description

Sonics offers to the plastics assembly industry a solution for welding single and multi-cavity parts produced by injection, extrusion, or blow molding. The hot plate welder, Model HPS 152/152, utilizes servo-motor actuation technology instead of traditional pneumatic or hydraulic actuation. Therefore, the system is capable of welding parts with wall thickness down to 1 mm.

The servo control system is compact, accurate, flexible, and reliable. In addition, it is sold at a price competitive with the pneumatic and hydraulic technologies. The Servo-Controlled Hot Plate Welder can be designed or modified to meet your application requirements.

There are many inherent features incorporated in the Servo-Controlled Hot Plate Welder that make it advantageous for these welding processes.

**No Mechanical Stops Required** - Through a keypad interface that contains password protection, all system actuation can be programmed. The welder can be rapidly set up due to its ability to store and retrieve programs through this keypad.

**Quick & Easy Set-up** - The tooling on the system is designed with a couple of bolts to eliminate the usual lengthy set-up procedure, making this unit very simple to operate and set up.

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# Servo-Controlled Hot Plate Welder: Features and Specifications

## Additional Features

**Dual Axis Positioning** - Yields independent control of the part melt depth. It also ensures accuracy to +/- .001" for more precision over the weld cycle.

**Variable Speed Control** - To ensure even more accuracy, variable speed control can be programmed for a precise melt during heating and assembly cycles.

**Contact Heating Mode** - Direct contact bonding is suitable for most types of materials. This mode creates applied pressure and heat to seal plastic parts in seconds.

**Radiant (Non-Contact) Heating Mode** - This mode is ideal for abrasive materials or for materials that tend to stick or string. The system can be quickly and simply programmed in order to avoid contact of the parts with the platen during the heating phase.

**Independent Heating Zones** - When welding parts of different materials, temperatures for separate heated platens can be digitally controlled and modified. A safety mechanism is in place to restrict the machine operation if temperatures fall below the target range. This is accomplished through feedback sensors.

## Welder Specifications

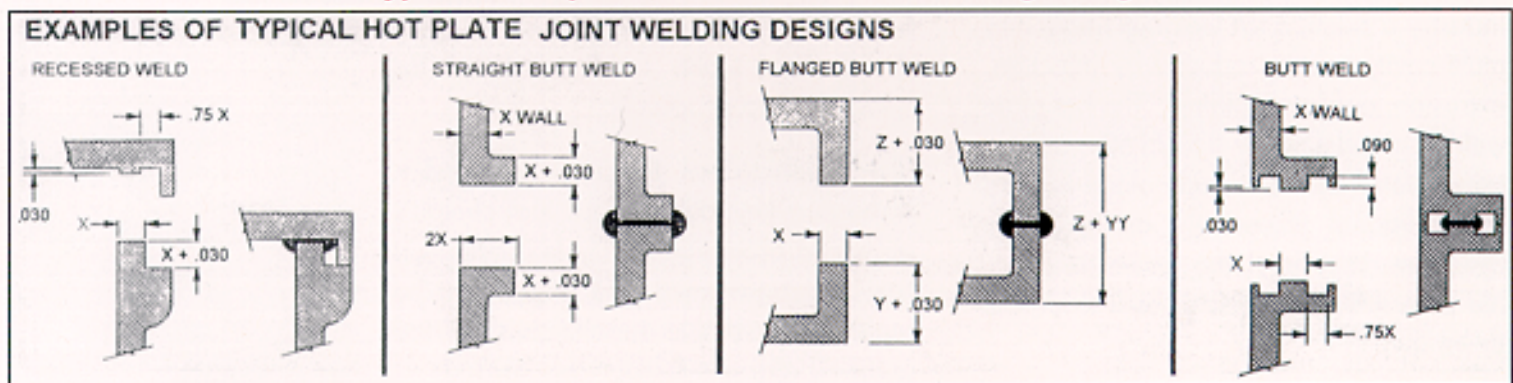
### Machine Dimensions

Height:	66" (1677 mm)
Width:	63" (1600 mm)
Depth:	31" (788 mm)
Maximum Opening:	10" (254 mm)
Hot Plate Area:	6" x 6" (152 mm x 152 mm)

Power Requirements:	240/480 3 phase
Platen Temperature Range:	150°-550° F (66°C-288°C)
Air Pressure Required:	80 psig (5.4 bar)
Heating Load:	2 KW
Melt Accuracy:	+/- .001" (+/- .025 mm)

Optional: non-contact hot plate temperature range, up to 1000° F (538°C)

## Typical Examples of Hot Plate Joint Welding Designs



Sonics can design or modify these systems as well as recommend the most appropriate joint welding design to meet a customer's specific application requirements.

Sonics & Materials, Inc.

