

Thermal Processor Model 301

General Description

Branson Thermal Processing Systems are designed for heat staking, thermal insertion, swaging, degating, and date stamping.

Thermal Staking

In thermal staking, also referred to as "heading or riveting," the controlled flow of the molten plastic is used to capture or retain another component, joining plastic to plastic, metal, or any other type of material (e.g., printed circuit boards).

Benefits of Thermal Staking / Swaging

- Excellent cosmetics
- Does not cause damage to fragile electronic or other sensitive components
- Minimal tool wear
- No flash or particulate are created
- Extremely tight stakes created
- Most thermoplastic materials easily staked/swaged
- Stake one or multiple stakes on multiple planes simultaneously
- No cracking, splitting, breaking, or stresses applied to bosses

Thermal Insertion

In thermal insertion a metal insert is placed in a boss or hole which is slightly smaller than the insert. This hole provides a certain degree of interference and also serves to guide the insert into place. The heat from the thermal tip travels through the insert to the interface of the metal and plastic. Heat generated by the thermal tip causes the plastic to melt, and as the thermal tip advances, the insert is imbedded into the plastic component. The molten plastic flows into the serrations, flutes, or undercuts of the insert, and when the heat source retracts, the plastic resolidifies and the insert is securely encapsulated in place.



Benefits of Thermal Insertion

- Multiple inserts at different levels can be seated simultaneously with practically no limit on quantity, size, or plane of the inserts.
- Different sized inserts can be driven simultaneously.
- No material limitations. Inserting into filled material can be accomplished with less damage to the inserts.
- Process does not produce metal flakes or chips
- Minimal tool wear
- Quiet operation.

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EMERSON
Industrial Automation

BRANSON

Branson Model (301-1) Standard Benchtop, Single Zone

Standard Features

- Unitronics operator interface/controller.
- Discrete, full-function temperature controllers with ramp and soak and self-teach mode.
- Temperature control monitoring and alarm.
- Post cooling.
- Shuttle control.
- Dual palm buttons with two hand anti-tie-down.
- 6" bore, 4" stroke, variable tonnage from 3/4 ton to 1-1/2 ton with four ball bearings on two hardened steel shafts, including fine adjustment features for platen height.
- 20" maximum working height without upper and lower tooling.
- Macro and micro adjustment for platen height.
- Pressure regulator, gauge and filter with lock out/tag-out.
- Full positional feedback for software control of beginning and end of stroke signals

Options

2, 3, 4, 5, 6, 7, or 8, temperature zones
Base with leveling feet and casters
Part shuttle with 10" stroke
Rotary table
Light curtain
Remote start

Fixturing and Tooling

Fixturing and tooling are quoted on a per part basis. Send parts and customer information to the Branson Systems Group in Honeoye Falls, NY, for evaluation.

Electrical Specifications

Power requirement: 230V AC, 15 amps,
1Ø, 60 Hz

Mechanical Specifications

Weight: Approx. 320 lbs.
(145 kg)
Height adjustment: 20" (508 mm)
Throat depth: 6.8" (172.72 mm)
Dimensions:
Overall machine: 20" wide x 24" deep
x 48" high (508 x
609.6 x 1219.2 mm)
Tooling platen: 14" wide x 8" deep
(355.6 x 203.2 mm)
Tooling stroke: 4" (101.6 mm)
Pneumatic
requirement: Clean (5 micron),
dry air, 80 psi @
20 CFM min

Note: All specifications subject to change without notice.

For further information, please contact Customer Service at Branson, Honeoye Falls, NY, 585-624-800, ext. 324.

Note: All sales shall be subject to the Supplier's terms and conditions of sale as described in Branson's quotations and sales contracts.

Warranty

Branson's Thermal Processor is warranted to be free from defects in materials and workmanship for one year.

Branson

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