



SONITEK

INTRODUCING OUR MOST **ADVANCED**
CALIBRATABLE HEATSTAKING SYSTEM!

SONITEK VERTEX SERIES

FEATURES

The VERTEX SERIES advanced Heat Staking Press was designed from the start to set new standards in quality, safety, & performance. Offering high speed, ergonomic & repeatable solutions for precise and repeatable thermal applications, like heat staking (riveting) of plastic bosses, insertion, filter & membrane sealing, and many more plastics joining applications.



- Self-Calibration Procedure, an industry first, for increased accuracy & compliance
- Extra-large Blanchard ground cast aluminum working platform with bolt hole circle patterns for mounting lower jigs and fixtures.
- Precise dovetail actuator support with new rigid column design for accurate and repeatable gross head adjustment, equipped with position indicator and hand crank for ease adjustment.
- 4-Post design precision guided non-rotating thruster/actuator with eight precision bearings and four ground and plated shafts for precise and repeatable process.
- Available in two press sizes:
 - VERTEX MINI & VERTEX MAX.
- Available in 4 thruster/actuator sizes (force values are at @ 100 psi.)
 - VERTEX MINI: V3 model = 300 lbs. V5 Model = 700 lbs.
 - VERTEX MAX: V10 Model = 1250 lbs. V20 Model = 1960 lbs.
- 5" (152mm) stroke with adjustable micro-positive stop with .001" increments.
- Thermal Runaway alarms with automatic heater shut off.
- Heater shut down with any loss of line pressure or E-stop function.
- Head Speed Controls for pneumatic portion of head travel for UP and DOWN speed control.
- Velocity and Distance Control unit model VCU for dual stage speed control and precision adjustment of stake depth.
- JOG MODE! New Feature: jog head up and down for set ups.
- Line pressure regulator (FR) with digital gauge read out and filter with dump valve and lock-out/tag out.

VERTEX is more precise, more versatile, more capable.

Contact us today to experience our expertise with more than
30+ years of engineering solutions for plastics joining and bonding applications.

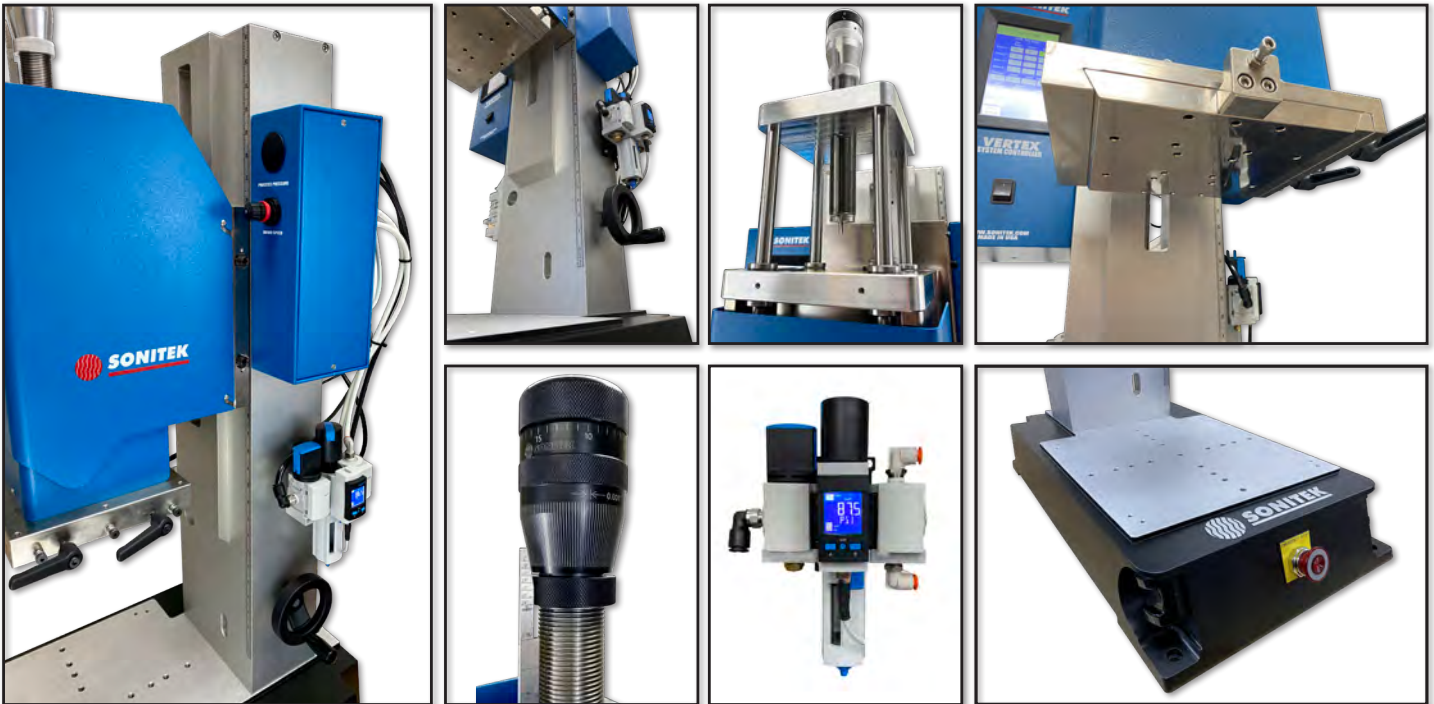
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FEATURES



- Rigid tool mounting plate for mounting upper heated tooling.
- Vertex Digital micro controller system with 5" or 7" (MAX press) COLOR touch screen HMI that controls ALL Process Parameters including timers, temperatures and multilevel alarms.
- HMI Integrated auto-tuning temperature controls.
- Dynamic zone and heater output assignments via HMI allows for easy configuration of multi-zone tooling change-overs.
- Secondary Temperature monitoring of tooling mode (view without control).
- JOB PRESETS - Multi Preset storage to store, recall, and assign parameters.
- Resettable & Lifetime cycle part counters.
- Hybrid Automation capable with I/O output and control options and accessories panel for rotary tables and integration of automation components and peripheral devices.
- Multi level Password Protection to prevent unauthorized access to controls.
- Sonitek 4 zone (upgradeable to 8 or more) temperature controlling power supply Model SW-1 equipped with settable auto-tuning PID controllers in F or C settings with digital LCD displays and with quick-connect heater/thermocouple connections located in rear.
- THREE Year Limited Warranty

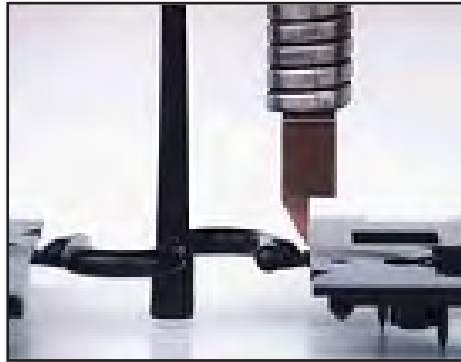


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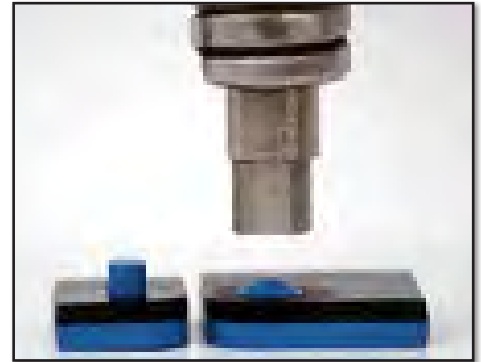
PROCESSES



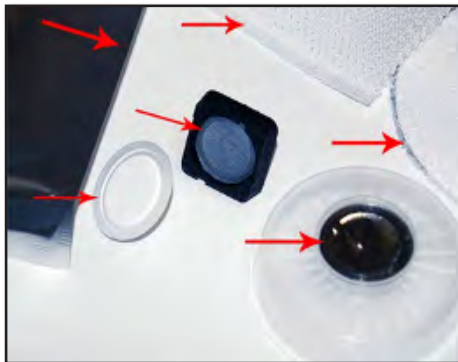
Install metal inserts or fasteners into your plastic housings. Simultaneously install 1 or 100 at a time including onto multiple planes.



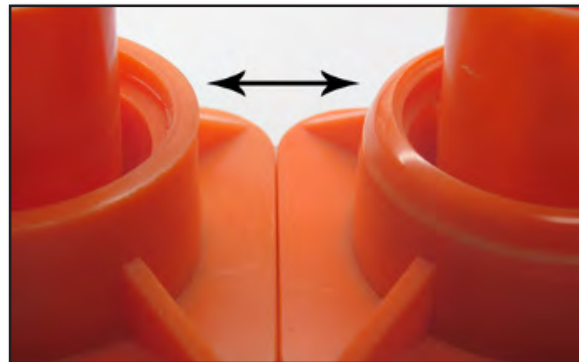
Cut or Trim runners and gates cleanly from your plastic parts and injection molded parts. Degate with vestiges with tight tolerances.



Staking is the process of connecting two components by creating an interference fit between the two pieces. One workpiece has a hole in it while the other has a boss that fits within the hole. The boss is very slightly undersized so that it forms a slip fit.



Seal PTFE membranes, and other filter media. Also heat seal films, foils and other tamper evident packages.



Swage walls of plastic to entrap metal objects or other foreign objects like PCB's and encase them into your plastic parts.



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OPTIONS & ACCESSORIES

- Factory Calibration Certificate (ships with system)
- Digital Air Package for total pneumatic process control. Includes digital EPR, Process Pressure alarms all programmed via HMI.
- OTA - Out of temperature process alarm which prevents machine from cycling if heaters are not within a settable +/- range.
- Additional 4 heated zone controller with outputs.
- Post Cooling Kit Assembly (May be required check with sales engineer)
- Opto-Touch (zero force) Palm Button upgrade (all models)
- Leveling plate for planarity squaring of fixtures to upper head
- Quick Change Tooling Head Assembly (includes one male dovetail)
- Additional Male dovetails only for additional upper heated tooling.
- Pneumatic slide table model PST-4 & PST-7 for use on Vertex series base
- End of Stroke sensor model EOS-1 to indicate cycle was completed
- Up to four part presence sensors
- Pre-heat Option for insertion applications
- Strip Delay with 2nd Post cooling
- PLA Pressure line loss alarms (included in Digital Air Package)
- USB DATA COLLECTION - Transfer machine data per cycle to a USB thumb drive or data collection system for analysis.

CALIBRATION

Self-Calibration procedure & software for measurement values of Time, Pressure, Temperature, Distance for increased accuracy and compliance purposes Sonitek supplies the following:

- OPTION 1: Self-Calibration Feature & Certificate:
 - Enables embedded controls on Vertex machine for calibration.
 - Includes initial Factory Calibration & Calibration Certificate
- OPTION 2: Calibration Toolkit (P/N 600-1320):
 - Includes 1 manual & Calibration Worksheet for step-by-step customer-calibration instructions for customer use.
 - Includes 1 set of adaptor cables, fittings, & harnesses for connecting customer calibration equipment to a Vertex Machine
- OPTION 3: Calibration Equipment (P/N 600-1321):
 - Includes recommended calibration equipment such as a thermocouple simulator, digital pressure gauge, oscilloscope, blank Calibration Certificate, and Calibration labels.



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SPECIFICATIONS

Power & Zones Options:

- Max 1440 Watt / 4 Zone / 120V 15A (Standard US wall plug)
- Max 1920 Watt / 4 Zone / 120V 20A
- Max 3840 Watt / 4 Zone / 240V 20A
- Max 3840 Watt / 8 Zone / 240V 20A

Weight:

VERTEX MINI = Approx. 170 lbs. (77 kg)

VERTEX MAX = Approx. 300 lbs. (136 kg)

Footprint:

VERTEX MINI = 14.01" wide (356mm) x 20.51" deep (521mm) x 33" high (838 mm)

VERTEX MAX = 16" wide (406 mm) x 26.625" (676 mm) deep x 40.5" high (102 mm)

Throat Depth:

VERTEX MINI = 5" (127 MM)

VERTEX MAX = 8" (203 mm)

Stroke:

VERTEX MINI = 5" (127 mm)

VERTEX MAX = 5" (127 mm)

Height Adjustment:

VERTEX MINI = 13.5" (342 mm)

VERTEX MAX = 19" (483 mm)

Air Requirement: ALL MODELS = Clean (5 micron), dry air, 80 psi @ 20 CFM min.

Air consumption = Stroke length (in.) x Cycles/min x SCFM factor

Power Factor: (3.14 = V3 Series), (7.07 = V5 Series), (12.57 = V10 Series), (19.64 = V20 Series)

*ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION, DESIGN OR OTHERWISE.

