

2024 Heat Staking Assembly Systems



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About Us

"Our passion is to be recognized by our customers as a viable business resource through consistent high precision manufacturing. Our goal is to retain the quality we have been known for while reducing lead times and therefore increasing customer satisfaction."

Toman ThermoSonics Inc, is an innovative, full service manufacturer of high quality, affordably priced thermal presses or heat staking machines as well as ultrasonic welding accessories and supplies designed to meet the thermoplastic assembly needs of the plastic product engineering industry.

Toman Tool was founded by the Rubasch brothers in 1989 in a barn in Viroqua, Wisconsin, eventually moving into a 10,000 sq. ft. manufacturing plant by 1998.

In 2014, the Toman intellectual property was acquired by Amtech Tool and Die Corporation. The name was changed to Toman ThermoSonics and moved to New Berlin, Wisconsin. Amtech's resources increased the manufacturing capabilities in DUT, metal stamping dies, jigs and gages.

In 2022 the Toman ThermoSonics division was acquired by Torey Bringa and became Toman ThermoSonics Inc. Shortly after, all production and offices were moved to a 12,000 sq. ft. manufacturing plant in Menomonee Falls, Wisconsin. With Torey's experience in electrical and mechanical engineering, willingness to acquire new state of the art equipment, and devotion to retaining and finding additional team members, Toman ThermoSonics Inc. is destined for growth.

2005 Ultrasonic to Thermal Conversion Kit

This thermal conversion kit simply turns any 20 kHz ultrasonic welder into a thermal assembly system. The model 2005 supplies the heat while your welder controls the timing. The kit consists of a control box with a Watlow temperature controller and a probe assembly, which includes a standard thermal probe, an insulator block and a stainless adapter block. It also includes a stud to attach the thermal probe to your welder. With our available adapter, it can be used in any drill press or milling machine with 1/2" capacity for proto-type work or low production jobs. It can also be mounted on a manual arbor press.

Features:

- Microprocessor-based temperature controller with digital display of set point and process value readout
- Stainless adapter block
- Non-asbestos insulator
- Thermal probe with built-in thermocouple
- 80-999 degree F. operating range +/-2 degree accuracy
- Easy-access illuminated on/off switch

Specifications:

- Power requirements: 110 VAC, 50/60 Hz
- Current draw at full rated output: 2.5 amps
- Dimensions: 8" cube
- Weight: 10 lbs.

Item# TBY017-01

Probe Adapter for drill press or milling machine
(1/2" chuck or collet required)

Item# TBY025

2005 Conversion Kit with Probe



2010 & 2010T Manual Heat Staking Assembly Systems

These lever-arm, manually operated systems are ideal for single-point or small, multi-point assembly operations. Each unit is exceptional for short-run prototype work, hot blade degating, off line repairs, date coding, branding and for testing new applications. The 2010T Manual Heat Staking Assembly System has a built-in digital timer. The operator can set and adjust the cycle time, ensuring that each part is assembled for the same amount of time. This improves part-to-part consistency and reliability. Ideal for laboratories and molding houses.

Features:

- Blanchard ground cast aluminum machine base with 3/8-16 fixture mounting holes
- Adjustable, locking depth stop for accurate tool adjustment
- Microprocessor-based temperature controller with digital display of set point and process value readout
- 80-999° F operating range +/-2 degree accuracy
- Non-asbestos insulator
- Easy-access on/off switch
- Easy adjustable head height
- Durable powder coated finish on all sheet metal surfaces

Specifications:

- Power requirements: 110 VAC, 50/60 Hz
- Current draw @ full rated output: 5 amps
- Stroke length: 2.5" (6.3 cm)
- Maximum force: 120 lbs.
- Weight: 34 lbs.

Item# TBY004

2010 Heat Staking Assembly System (1 Heat Zone)

Item# TBY007

2010T Heat Staking Assembly System
(Timer & 1 Heat Zone)



2020 & 2020HD Heat Staking Assembly Systems

These stand-alone pneumatically-operated, 2020 & 2020HD heat staking assembly systems develop 120 pounds of down force and are ideal for smaller inserts or stakes up to 1/4".

The 2020HD (Heavy Duty Series) produces 500 pounds of down force and can do several stakes or inserts up to 3/8".

Both models come with the added benefit of easy head height adjustment (from 4" to 16"). The head has a pair of column clamp handles and a counter balance spring which make the head both light and easy to move. Simply loosen the clamps and move the head up or down as desired.

Features:

- Blanchard ground cast aluminum machine base with 3/8-16 fixture mounting holes
- Adjustable head height and mechanical stop for accurate tool adjustment
- Dual ram speed for decreased cycle time
- Digital readout, dwell timer for repeatable process control
- 3" x 4" platen for upper tooling
- 80-999 degree F. operating range +/-2 degree accuracy
- Microprocessor-based PID temperature controller with digital display of set point and process value
- Illuminated Emergency Stop button
- Non-asbestos insulator
- Flow controls for adjustable stroke speeds
- Air filter/regulator
- Dual, anti-tiedown, no-touch ergonomic actuation
- Adjustable shock absorber for controlling tooling advance
- Durable Powder Coated finish on all sheet metal surfaces

Item# TBY077

2020 Heat Staking Assembly System (1 Heat Zone)

Item# TBY079

2020HD Heat Staking Assembly System (1 Heat Zone)



Specifications:

- Power requirements: 110 VAC, 50/60 Hz
- Current draw @ full rated output: 5 amps
- Pneumatic requirements: Clean, dry air @ 100 psig
- Maximum Force: 120 lbs. @ 100 psig for the 2020
- Maximum Force: 500 lbs. @ 100 psig for the 2020HD Stroke length: 4" (10.16 cm) Weight: 72 lbs.

2020 & 2020HD Evolution Series Heat Staking Assembly Systems

Our 2020 & 2020HD Evolution Series Heat Staking Assembly Systems have all of the features of our 2020 Adjustable machines, plus a PLC. This allows our customers the ability to add further automation to this machine. Part present sensors, a full down sensor and a pressure transducer may all be added to validate part consistency. These stand-alone pneumatically-operated, bench top systems develop 120 pounds of down force and are ideal for smaller inserts or stakes up to 1/4". The 2020HD (Heavy Duty) has 500 pounds of down force and can do several stakes or inserts up to 3/8".

Features:

- Blanchard ground cast aluminum machine base with 3/8-16 fixture mounting holes
- Adjustable head height and mechanical stop for accurate tool adjustment
- Dual ram speed for decreased cycle time
- Digital readout, dwell timer for repeatable process control
- 3" x 4" platen for upper tooling
- 80-999 degree F. operating range +/-2 degree accuracy
- Microprocessor-based PID temperature controller with digital display of set point and process value
- Illuminated Emergency Stop button
- Non-asbestos insulator
- Flow controls for adjustable stroke speeds
- Air filter/regulator
- Dual, anti-tiedown, no-touch ergonomic actuation
- Adjustable shock absorber for controlling tooling advance
- Durable Powder Coated finish on all sheet metal surfaces

Item# TBY077E

2020 Evolution Series (1 Heat Zone)

Item# TBY079E

2020HD Evolution Series (1 Heat Zone)



Specifications:

- Power requirements: 110 VAC, 50/60 Hz
- Current draw @ full rated output: 5 amps
- Pneumatic requirements: Clean, dry air @ 100 psig
- Maximum Force: 120 lbs. @ 100 psig
- Maximum Force: 500 lbs. @ 100 psig for the 2020HD
- Stroke length: 4" (10.16 cm)
- Weight: 72 lbs.

2020 & 2020HD Automation Heat Staking Assembly Systems

These versatile pneumatically-operated 2020 & 2020HD Automation Heat Staking Assembly Systems develop 120 pounds of down force and are ideal for smaller inserts or stakes up to 1/4". The 2020HD (Heavy Duty Series), has 1/4 ton of force and can do several stakes or inserts up to 3/8". They can be mounted to a bench or to a machine base in an automation application. These automation units are ideal for high production lines. An input from the customer is required to start the cycle.

Features:

- Adjustable mechanical stop for accurate tool adjustment
- Dual ram speed for decreased cycle time
- Digital readout, dwell timer for repeatable process control
- 3" x 4" platen for upper tooling
- 80-999 degree F. operating range +/-2 degree accuracy
- Microprocessor-based PID temperature controller with digital display of set point and process
- Non-asbestos insulator
- Flow controls for adjustable stroke speeds
- Air filter/regulator
- Durable Powder Coated finish on all sheet metal surfaces
- Adjustable shock absorber for controlling tooling advance



Specifications:

- Power requirements: 110 VAC, 50/60 Hz
- Current draw @ full rated output: 5 amps
- Pneumatic requirements: Clean, dry air @ 100 psig
- Maximum Force: 120 lbs. @ 100 psig for the 2020
- Maximum Force: 500 lbs. @ 100 psig for the 2020HD
- Stroke length: 4" (10.16 cm)
- Weight: 72 lbs.

Item# TBY092

2020 Automation
Heat Staking Assembly System
(1 Heat Zone)

Item# TBY098

2020HD Automation
Heat Staking Assembly System
(1 Heat Zone)

2030 Heat Staking Assembly Systems

This versatile 2030 Heat Staking Assembly System also develops 1/2 ton of down force and is ideal for assembling components within a 12"x18" area. It can work on multiple planes or in restricted areas during a single cycle. The unit is standard with two zones but can accommodate up to six zones that are individually monitored by a microprocessor-based, digital display, temperature controller. It comes with a convenient screw and nut arrangement for coarse head height adjustments.

Features:

- Blanchard ground cast aluminum machine base with 3/8-16 fixture mounting holes
- Head height adjustment from 7 1/2" – 19 1/2"
- Adjustable mechanical stop for accurate tool adjustment
- Head-down, setup switch
- Dual ram speed for decreased cycle time
- Digital readout, dwell timer for repeatable process control
- Microprocessor-based PID temperature controller with digital display of set point and process value
- 6" x 6" platen for upper tooling
- 80-999 degree F. operating range +/-2 degree accuracy
- Dual anti-tiedown, no-touch ergonomic actuation
- Ability to switch heater on/off for easy setup
- Adjustable shock absorber for controlling tooling advance
- Durable Powder Coated finish on all sheet metal surfaces
- Illuminated Emergency Stop button
- Non-asbestos insulator
- Flow controls for adjustable stroke speeds
- Air filter/regulator

Item# TBY096

2030 Heat Staking Assembly System (2 Heat Zones)



Specifications:

- Power requirements: 110 VAC, 50/60 Hz
- Current draw @ full rated output: 10 amps
- Pneumatic requirements: Clean, dry air @ 100 psig
- Maximum Force: 1,200 lbs @ 100 psig
- Stroke length: 4" (10.16 cm)
- Weight: 350 lbs

2030HD Heat Staking Assembly Systems

This versatile 2030HD heat staking assembly system develops 1-1/2 tons of down force and is ideal for assembling larger components with a bench top machine. The unit is standard with six zones that are individually monitored by a microprocessor-based, digital display and temperature controller. Tools of different lengths, and for different tasks, can be combined on the same tooling platen. Multiple parts can be fixtured for simultaneous processing. One 2030HD can often solve production problems that would otherwise require expensive, multiple assembly systems.

Features:

- Blanchard ground cast aluminum machine base with 3/8-16 fixture mounting holes
- Adjustable stand with 12-3/4" available travel
- 10" throat depth to accommodate larger parts
- Adjustable mechanical stop for accurate tool adjustment
- Head down, setup switch
- Dual ram speed for decreased cycle time
- Digital readout, dwell timer for repeatable process control
- A microprocessor-based, digital display controller for accurate temperature regulation of each zone
- 6" x 6" platen for upper tooling
- 80-999 degree F. operating range +/-2 degree accuracy
- Dual anti-tiedown, no-touch ergonomic actuation
- Ability to switch heater on/off for easy setup
- Adjustable shock absorber for controlling tooling advance
- Emergency stop; non-asbestos insulator; flow controls for adjustable stroke speeds; air filter regulator; base with fixture mounting holes



Specifications:

- Power requirements: 110 VAC, 50/60 Hz
- Current draw @ full rated output: 10 amps
- Pneumatic req.: Clean, dry air @ 100 psig
- Maximum force: 3,000 lbs @ 100 psig
- Stroke length: 4" (10.16 cm)
- Weight: 350 lbs

Item# TBY108

2030HD Heat Staking Assembly System (6 Heat Zones)

2030 Automation Heat Staking Assembly Systems

The pneumatically-operated 2030 Automation Heat Staking Assembly System is designed for integration into rotary or in-line, automated assembly lines. This system develops 1/2 ton of down force and is ideal as a single point unit for large, insert or staking operations. An input from the customer is required to start the cycle.

Features:

- Available with built in PLC or analog outputs to tie into your PLC system
- Available with 1 to 12+ independently controlled heat zones
- Blanchard ground cast aluminum machine base with 3/8-16 fixture mounting holes
- Adjustable mechanical stop for accurate tool adjustment
- Dual ram speed for decreased cycle time
- Digital readout, dwell timer for repeatable process control
- 6" x 6" platen for upper tooling
- 80-999° F operating range +/-2 degree accuracy
- Microprocessor-based PID temperature controller with digital display of set point and process value
- Non-asbestos insulator
- Flow controls for adjustable stroke speeds
- Air filter/regulator
- Adjustable shock absorber for controlling tooling advance
- Durable Powder Coated finish on all sheet metal surfaces



Item# TBY096A

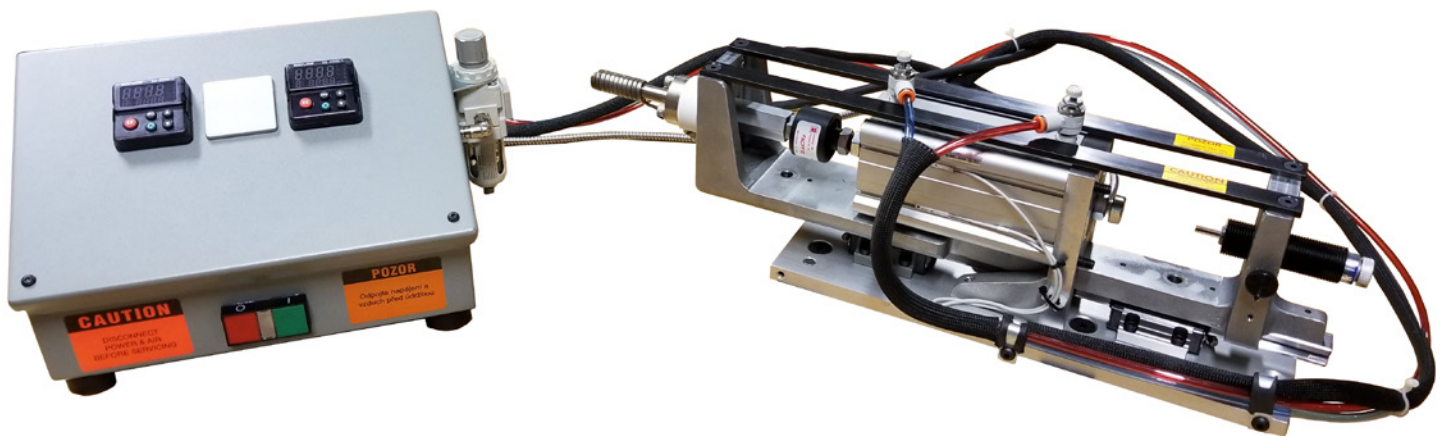
2030 Automation
Heat Staking Assembly System (2 Heat Zones)

Item# TBY096AE

2030 Automation Evolution Series
Heat Staking Assembly System (2 Heat Zones)

Specifications:

- Power requirements: 110 VAC, 50/60 Hz
- Current draw @ full rated output: 10 amps
- Pneumatic requirements: Clean, dry air @ 100 psig
- Maximum Force: 1,200 lbs. @ 100 psig
- Stroke length: 4" (10.16 cm)
- Weight: 320 lbs.



2050 Heat Staking Assembly Systems

The 2050 power supply and actuator is designed for integration into rotary or in-line, automated thermal assembly systems, and comes configured with one heat zone (no probe). It can be used vertically, horizontally or mounted at any angle. The 2050 (TBY021) actuator develops 120 pounds of force and is ideal for smaller inserts or stakes up to 1/4". Its sister model, the 2050HD (TBY021 Heavy Duty), has a 1/4 ton of force and can do several stakes or inserts up to 3/8". The 2070 actuator develops 1200 pounds of force. The power supply controls the air pressure, the dwell time and the heater temperature. It requires a remote start signal and it can be located separately from the actuator for convenient setting adjustments. It comes with a 6' power cord and can be configured with up to 4 zones.

Power Supply Features:

- Digital readout, dwell timer for repeatable process control
- Microprocessor-based PID temperature controller with digital display of set point and process value
- 80-999° F operating range +/-2 degree accuracy
- Air filter regulator with integrated gauge
- Air valve for tooling advance
- Note: Cabinet configuration is subject to change

Actuator Features:

- 4" stroke (100mm)
- Linear Ball Bearing blocks with hardened guide rail
- Adjustable mechanical stop for accurate tool adjustment
- 3" x 4" platen for tooling
- Easy access controls for adjusting the rate of tool advance speed

Specifications:

- Power requirements: 110 VAC, 50/60 Hz
- Current draw @ full rated output: 5 amps
- Pneumatic req.: Clean, dry air @ 100 psig
- Maximum force:
(2050 Unit) 120 lbs. @ 100 psig
(2050HD Unit) 500 lbs. @ 100psig
(2070 Unit) 1,200 lbs. @ 100psig
- Actuator Weight: 16 lbs

Item# TBY020

2050 Actuator and Controller (Probe not included)

Item# TBY021

2050HD Actuator and Controller (shown)
(Probe not included)

Item# TBY120

2070 Actuator and Controller (Probe not included)



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