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Model 727

Discrete MULTI-PART Ring Terminal Shuttle Oven for heat-shrinkable tubing, thermal processing and curing.

The Model 727 MULTI-PART Ring Terminal Shuttle Oven is a low maintenance, manual load, electro-pneumatic thermal processor suitable for heating a variety of products, including heat-shrinkable tubing, solder paste applications, and thermal curing of various products.

The Model 727 is designed for multiple part cyclical processing of products. Product specific fixtures allow processing of up to nine (9) ring terminal assemblies with each machine cycle.

The M727 is designed as an integrated unit consisting of processor shuttle drive, heating chamber, and remote control enclosure.

Up to nine (9) ring terminal assemblies can be loaded onto locating pins of product specific fixtures, the heat shrink tubing is positioned over the crimp joints of the assemblies and the operator depresses the cycle start foot switch.

When the cycle start is initiated the pneumatic cylinder retracts the assemblies into the heating chamber for a selectable dwell time period, the completed assembly is then returned to the load position.

The pneumatic shuttle system incorporates a 9/16" bore cylinder with a precision linear slide shuttle, creating smooth vibration free travel during entry and exit from the heating zone.

The M727 oven chamber has two 750 watt quartz glass tube infrared heating elements, above and below the product entry pass line. The heating chamber oven is insulated with thermal reflectors to contain the heat in the processing area.

The temperature of the heating elements is precisely maintained by a closed loop temperature controller with thermocouple feed back control.

Heating element voltage for the M727 is 230VAC and control circuit voltage is 24VDC.

Cycle start is initiated by a remote foot switch actuation

The M727 is equipped with a green PROCESS READY indicator light to advise the operator of the temperature status of the unit.

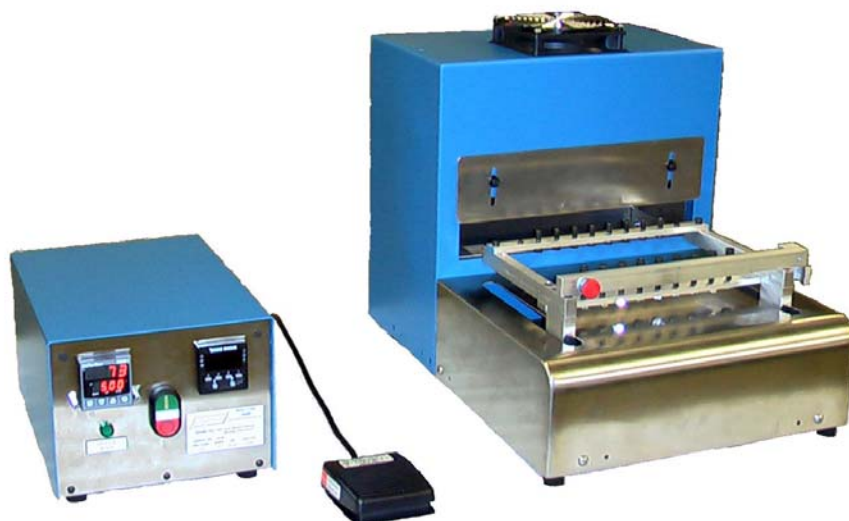
When the element temperature is in range of the set-point, the indicator illuminates indicating the processor is ready for operation.

The control circuitry prohibits the processor from cycling when the indicator light is not illuminated.

The M727 processor operates on 230 VAC, single phase, 50/60 Hz, 10 Amp entry power.

The M727 is designed to meet the requirements of the Occupational Safety and Health Administration (OSHA), the National Electrical Code (NEC) and European Compliance requirements.

Sheet metal guards and fans protect the operator from exposure to the temperature in the heating chamber. The processor has an automatic cool-down circuit to prevent heat damage to the components when the unit is powered off.



Product features

Controlled heating zone.

The Model 727 Processor uses opposing 750 watt quartz tube heating. Consistent oven chamber temperature is obtained through a K-type thermocouple embedded into the upper heating element, and a closed loop PID temperature controller.

When the element temperature is within the process temperature control range, a "Process Ready" indicator light illuminates.

When the temperature is out of range of the set point the controls prohibit the initiation of a process cycle

Shuttle speed control and Dwell time.

The shuttle velocity is set by integral speed controls mounted in the solenoid air valve. The dwell period that the assemblies remain in the heating chamber is digitally set by a timer in one tenth second increments with a range of 0.1 to 999.9 seconds.

Minimal skill requirements.

The operator only needs to load the ring terminals onto the locating pins of the product specific fixture, position the heat shrink tubing over the crimp joints of the assemblies and depress the cycle start button. The air cylinder shuttle carries the assemblies into the heating chamber for a predetermined time and returns the assembly to the operator load position.

Versatility.

The processor is designed to process a broad range of heat-shrinkable products up to 3/4 inch in diameter and 2 inches in length. The infrared energy source is ideally suited to efficient processing of either single-wall or dual wall adhesive-lined tubing. Temperature set-point and dwell time can be controlled to accommodate a wide variety of products and substrates.

Safety features.

- Circuit breaker for current overload and mains power disconnect.
- Automatic cool-down circuit to prevent heat damage to integral components.
- Over temperature thermal switch to shut the unit down if an over temp condition is sensed.
- Indicator light to advise operator of process ready.
- Temperature out of range Cycle Prohibit.

Options.

- Product Specific Fixturing bars to support the ring terminals and position the tubing prior to recovery.

Specifications and dimensions

Utilities

Electrical Power Requirements	208/240 VAC, 1Ø, 50/60 Hz, 8 A	P/N 12000043
Compressed Air Requirements	5 Bars (70 PSI)	

Processor Unit

Heating elements	(2) 750 watt, 10" quartz glass infrared; one top & bottom
Operating Temperature	Ambient to 500° C
Drive System	Pneumatic cylinder with precision linear slide
Electrical Control Voltage	24VDC, 60
Effective Heating Length	63mm (2.5")

Standard Unit Dimensions mm (in.)

Processor Dimensions	356 mm (14") W x 508 mm (20") D x 406 mm (16") H
Processor Weight	18 Kg (40 lb.)
Control Panel Dimensions	216 mm (8.5") W x 305 mm (12") D x 178 mm (7") H
Control Panel Weight	6 Kg (12 lb.)
Shipping Weight	46 Kg (100 lb.)

Product sizes

Inside diameter	Up to 20 mm (.75")
Length	51 mm (2") parallel to cylinder travel