

Thermex Thermatron, LP

High Frequency Heat Sealers

Thermex Introduces the State-of-the-Art Model T40CW-DS RF Automotive Pad Carpet Bonding System

The Model T40CW-DS welding system is a heavy-duty, industrial grade system designed and built in accordance with the rigorous performance requirements of the automotive industry. It is required to perform multiple pad seals (heel, toe or scuff), over a range of pad sizes on a 24/7 basis.



The system incorporates the latest in both PLC and RF technology, providing loading and sequential sealing of all pads, without the need to reload the carpet into that station. The system incorporates two opposing shuttles for maximum productivity, and operator interface options for both manual and automatic operation. The radio-frequency generator is designed to provide a maximum RF output power of 40 KW, at a nominal frequency of 27.12 MHz. The RF output circuit is designed to provide maximum flexibility to accommodate a large variety of carpet configurations. Additionally, an SCR controller is introduced to control the plate voltage providing even greater flexibility when bonding pads of small area.

The high-voltage power supply uses a solid-state, full wave, MOV protected, silicon diode rectifier system with half/full voltage switch for ease of testing and troubleshooting. The system also includes a patented electronic arc detection system to protect process materials and dies. Power and process controls are adjustable via an Allen Bradley HMI or manually depending on the key lock setting of the operating mode selector switch. An Allen Bradley PLC is provided for automatic tuning and for monitoring process parameters during each bonding cycle.

Thermex Thermatron, LP
"High Frequency at Its Best"

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Specifications:

RF Generator	
Power Input:	480 VAC, 60 Hz, 3-phase, 62 KVA
Power Output:	Maximum 40KW
Operating Frequency:	27.12 Nominal
Power Control Range:	Continuous from 5 to 40KW
Arc Detection:	Patented AS-5™ Electronic Arc Suppressor
Cooling:	Air
Controls:	115 VAC
Press/Shuttle System	
Maximum Carpet Area:	97" L by 87" W by 15" H
Press Type:	Four-post, down-acting, pneumatic
Maximum Pressure:	10 tons
Incoming Line Pressure	Adjustable 20 to 80 PSI
Total System Length:	25 feet 6 inches
Total System Width:	9 feet 2 inches
Die Temperature Control:	Closed-loop, water-cooled system.

The press is of heavy-duty, four-post style construction. It is an industrial grade, down-acting pneumatic press with precision guidance system. It is designed to provide up to ten tons of force on the load, adjustable to application requirements.

The double shuttle system is designed to accommodate various molds and dies. The shuttles are independently operated, powered by an electric motor with four-quadrant control of acceleration, deceleration, and braking. They are designed to index into the bonding area within 5-6 seconds. Two operator stations are provided for independent shuttle operation.

Each tray accommodates molded carpets, approximately 97 inches long, 87 inches wide, and 15 inches high. A closed-loop temperature control system is provided to maintain constant die temperature. A vacuum system is also provided for holding the pads in position while the carpet is being loaded. Safety is of course a primary concern to Thermex Thermatron. The system is provided with state-of-the-art shielding for RF radiant energy, and full shuttle and press opening light curtain protection for operator safety. All other press and shuttle areas that potentially expose the operator to moving parts or pinch points are covered with expanded metal panels. The system is also provided with hydraulic counterbalance to prevent the press platen from falling in the event of pneumatic failure. Special press open safety posts are provided as well to prevent the press from closing during maintenance.

We invite you to contact us today for additional information on the system, professional assistance with your application or simply to learn more about dielectric heating.

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