AUSTROMAT®
µSiC®

DEKEMA
DENTAL-KERAMIKÖFEN

AUSTROMAT®
µSiC®

The DEKEMA® high temperature furnace AUSTROMAT® µSiC® is equipped with three silicon carbide heating elements to safely and consistently operate at temperatures up to 1600 °C. Outstanding strength, durability and long-life cycles characterize these heating elements. The firing chamber is especially designedin a cylindrical shape, closed from below by a vibration-free lift. All components of the AUSTROMAT® µSiC® firing chamber are made of highest purity materials to ensure a very homogeneous heat distribution and a clean atmosphere. Two platinum/platinum-rhodium thermocouples monitor and control the temperature. Several levels of diameters up to 10 cm can be placed on top the multilayered insulation table up to a height of 15 cm; thus, sintering of more than 80 units is possible at a time. The sintering crucibles provide openings on their sides to allow the use of the gripper tool (optionally availability) for easy and safe loading and unloading. The time-tested AutoDry® system of conventional DEKEMA® ceramic furnaces guarantees both precise drying above 50°C and very quick and direct cooling below 1000°C. This allows currently known sintering times can be reduced by 70% or more, depending on the used materials.

The display of the USB terminal is used to choose between 10 stored programs and provides information on the status of the running program. A program is easily started by pressing a button at the USB terminal.

Integrated web server technology allows modifications, even when a program is running. A JAVA™ compatible browser is sufficient to enable communication with the AUSTROMAT® µSiC® via a freely selectable IP address. The password protected area provides many options for customizing and changing the stored programs via PC or MAC. Free programming is possible and allows any individual program sequence. Connecting the AUSTROMAT® µSiC® with a network gives access to online diagnostics or furnace software updates through the Internet. A backup and recovery function via USB interface prevents data loss reliably. In addition, the USB interface can be used for writing and reading firing programs. Alternatively, the program sequences can be recorded onto a USB stick or read online via FTP.

The AUSTROMAT® µSiC® automatically identifies the input supply voltage and can be operated with standard electrical power.

Power consumption of less than 2 kW, the reduced sintering cycle times, and the large capacity of the AUSTROMAT® µSiC® allow in enhanced productivity and optimized processing reliability.

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	Range	Interval	Item
Temperature in the firing chamber	50 to 1600	1	°C
Lift position	0 to 9	1	open to closed
Time	1 to 64000	1	s
Acoustic signal	1 to 9	1	Number of rings
Heat rate	1 to 100 *	1	°C/min
Time-controlled heat rate	50 to 1600	1	°C/time interval
Time-controlled lift movement	1 to 9	1	Lift position/time interval
AutoDry	50 to 1000	1	°C
...and many more	individual parameters and programs		

* depending on the temperature in the firing chamber

Setup: units, language/time, screen settings, network, general code, furnace identification, acoustic signal, drying temperature, heating settings, lift settings, check program, oxidation, temperature calibration, printer, quality management, diagnosis data, login data, backup/recovery and many other functions

DEKEMA® AutoDry®: Simulates object temperature measurement and automatically regulates the distance between the firing chamber and the firing object with the vibration-free lift for precise drying and cooling phases.

Automatic self-test: Internal test routines continuously monitor the temperature while the program is running.

Check program: An automatic diagnostics routine is integrated for all system components to determine the service intervals.

Network: JAVA™ Technology for use via IE6, Firefox, Opera, Safari etc.; supports cable-connected devices with automated IP address (DHCP); FTP client/server; OPC server support (optional)

Connections: 1 USB and 1 Ethernet (RJ45)

Scope of delivery: Ceramic furnace AUSTROMAT® µSiC®, multi-compound insulation table, USB terminal, operating instructions USB terminal

Technical data: 100-240 V / 50-60 Hz, max. 2000 W (adjustable)

Dimensions: 42 cm x 98 cm x 60 cm (width x height x depth), approx. 75 kg (165 lbs)
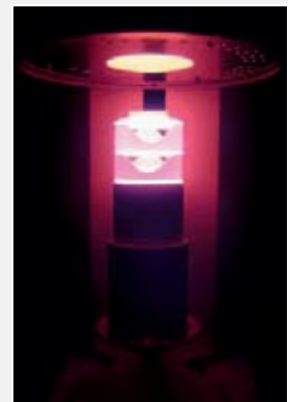
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High temperature calibration case: The external thermocouple, made out of platinum/platinum-rhodium, runs through this insulated firing platform and allows external temperature measurements through the two equalizing conductors. The provided measuring instrument is officially calibrated in accordance to regulations. Calibration routines are already integrated in the setup menu. The chamber temperature in the AUSTROMAT® µSiC® high-temperature furnace can thereby be easily and quickly checked.

Sintering tool: The DEKEMA® sintering tools, basically made out of Al_2O_3 ensures a clean atmosphere in the furnace, especially at high temperatures. The design of these bases and rings is optimized for lasting durability and stability even at high temperatures.

Gripper tools: The side openings in the rings allow you to grip below the base with optional tool and easily load and unload the high temperature furnace.

The overall stackable height is 15 cm and can be divided into several levels. For safety reasons, we recommend lifting only one level at a time.

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