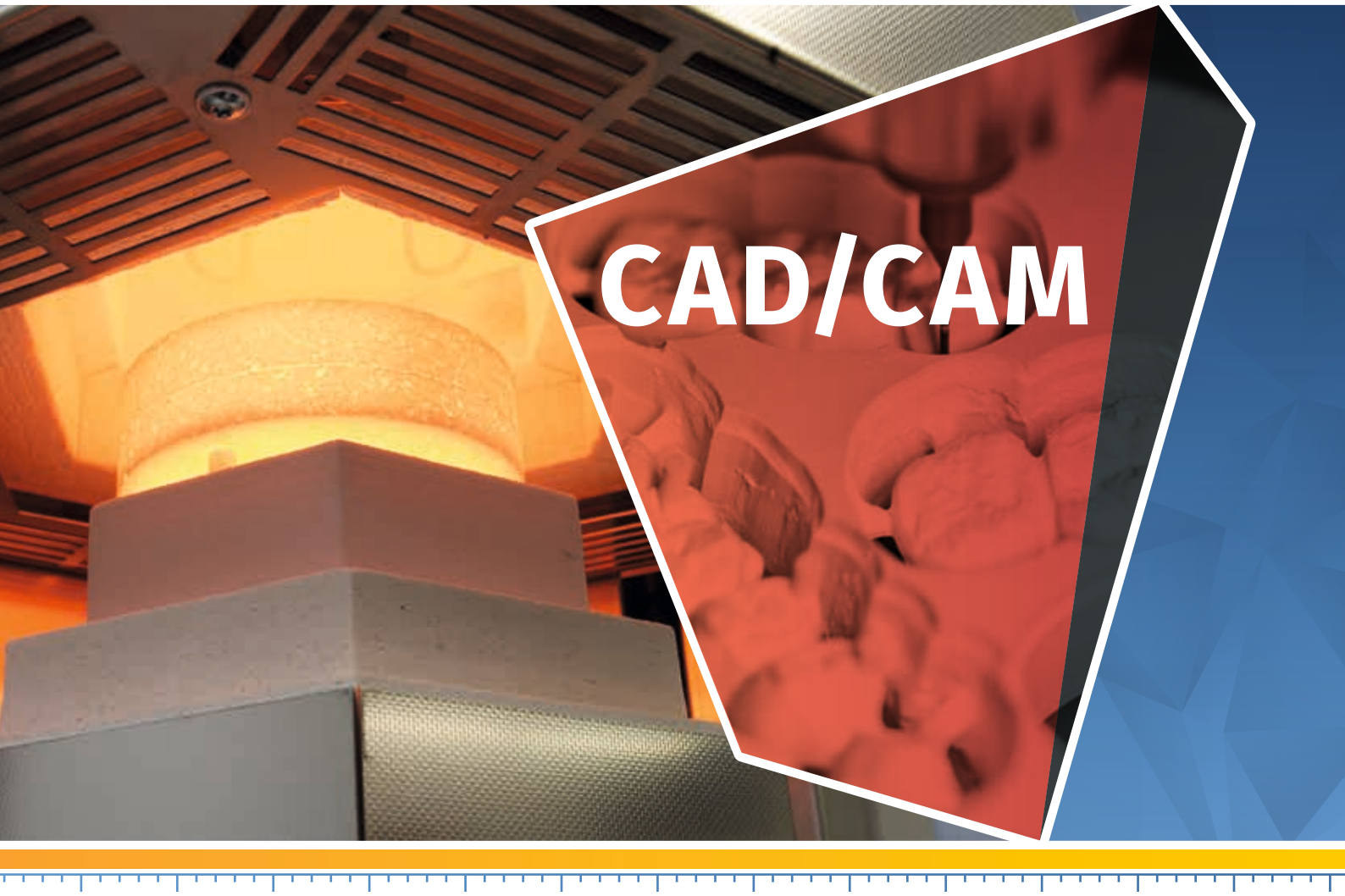
mihmvogt



MODEL OVERVIEW

2023

MADE IN GERMANY

EVERYBODY IS TALKING ABOUT FREEDOM OF CHOICE - WE CREATE THE CONDITIONS.

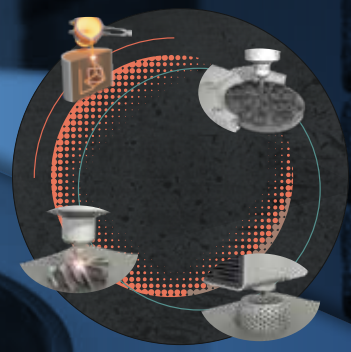
MoSi2

High-purity molybdenum-disilicide heating elements from the semiconductor industry

SiC

Durable silicon-carbide heating elements for temperatures up to 1550°C

CAD/CAM



ZIRKON

Sintering of all standard zirconium ceramics

METAL

Sintering of CoCr milling blanks under protective atmosphere

mv-r

mv-r
7204000100

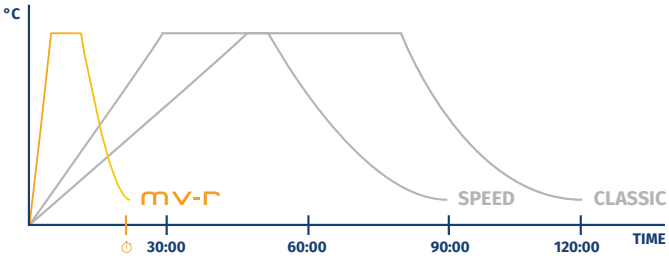
Technical Information

Heating system		
Process capability		SPEED CLASSIC
Max. temperature	in °C	1650°C **
Heating elements	Type/ number	MoSi2 / 4
Shortest heating period	in min	8 min to 1500°C "SPEED Motion"
Thermocouple type		PtRh-Pt, type S
Temperature accuracy at 1500°C	in °C	+/- 1°C
Max. heating-chamber capacity	Number of trays	** 2 x 100/30 mm
Heating chamber height	in mm	75 mm
Program control		
Max. rise in temperature	in °C/min	0–900 °C 200 °C/min 901–1200 °C 150 °C/min 1201–1650 °C 125 °C/min
Program capacity		200
Number of programmable heating / cooling stages		10
Min. temperature rate	in °C/min	0,1 °C/min
Special functions		Drying; Heating-up ventilated; Heating stand-by
Service programs		1-Temperature control* 2-Purge heating chamber 3-Regenerate heating elements

*only in conjunction with MV test-kit ** Sintering tray SiC, 100/30 max. 1550°C!

Features

7" Touch Display	✔
Easy menu navigation	✔
USB interface for updates	✔
Error diagnosis via QR code	✔
System test on restart	✔
Controlled device cooling with cooling fan monitoring	✔
Timer function	✔
Linear Cooling	✔



Technical data	MV-R
Power max.	3500 W
Voltage range; frequency	200–240 V; 50/60 Hz
Weight	65 kg
Dimensions W/D/H	390/540/780 mm
Energy consumption per sintering cycle in kWh	1,8 kWh at SPEED

ZIRKON

SiC

TABEO-1/S/ZIRKON-100
7201000001

TABEO-2/S/ZIRKON-120
7201000002

Details ✔ standard ✖ not compatible

Technical information

Heating-chamber height	mm	42	92
Max. heating-chamber capacity	number of trays	 1 x 100/30 mm	 3 x 120/30 mm
Heating system			
Process capability		CLASSIC	CLASSIC
Max. temperature		1550°C	1550°C
Heating elements	type	SiC	SiC
	number	4	4
Process times CLASSIC [1*]			
Max. programmable heating rate	°C/min	25	25
Shortest heating period to 1.500°C at 230V	min	63	58
Shortest cooling period to 300°C	min	124	143
Process duration (incl. holding time 30 min)	min (h)	217 (3,6)	231 (3,9)
Process times SPEED [1*]			
Max. programmable heating rate	°C/min	✖	✖
Shortest heating period to 1.500°C at 230V	min	✖	✖
Shortest cooling period to 750°C	min	✖	✖
Process duration (incl. holding time 30 min)	min (h)	✖	✖
Program control			
7-segment LED		✔	✔
4-lines LCD		✖	✖
Number of programmable stages		4	4
Program capacity		9	9
	Number of customizable programs	✖	✖
	Number of free programs	9	9
Special programs			
Drying		✖	✖
Heating-up ventilated		✖	✖
Service programs			
A-Temperature control [2*]		✔	✔
C-Purge heating chamber		✔	✔
E-Regenerate heating elements		✖	✖
Thermocouple			
PtRh-Pt, type S		✔	✔

Special functions

Emergency cooling system		✖	✖
RS 232 interface		✔	✔
Door lift		✖	✖
Shielding-gas supply		✖	✖
Timer function		✔	✔

Technical data

Power max.	W	1700	2000
Voltage range; frequency	V;Hz	200-240; 50/60	200-240; 50/60
Weight	kg	60	85
Dimensions W/D/H	mm	400/400/600	480/460/680

[1*] Process values: Sintering temperature = 1500°C; holding time = 30min; 1 x sintering tray **[2*]** only in conjunction with test-kit

MoSi2

ZIRKON

TABEO-1/M/ZIRKON-100
7201000000

TABEO-2/M/ZIRKON-120
7201000004

HTS-2/M/ZIRKON-120
7202000002

HT-2/M/ZIRKON-120
7203000001

Details ✔ standard ✖ not compatible

Technical information

		TABEO-1/M/ZIRKON-100 7201000000	TABEO-2/M/ZIRKON-120 7201000004	HTS-2/M/ZIRKON-120 7202000002	HT-2/M/ZIRKON-120 7203000001
Heating-chamber height	mm	42	92	72	102
Max. heating-chamber capacity	number of trays	 1 x 100/30 mm	 3 x 120/30 mm	 2 x 120/30 mm	 3 x 120/30 mm
Heating system					
Process capability		CLASSIC	CLASSIC	SPEED CLASSIC	SPEED CLASSIC
Max. temperature		1650°C	1650°C	1650°C	1650°C
Heating elements	type	MoSi2	MoSi2	MoSi2	MoSi2
	number	4	4	4	6
Process times CLASSIC [1*]					
Max. programmable heating rate	°C/min	25	25	30	30
Shortest heating period to 1.500°C at 230V	min	61	72	55	49
Shortest cooling period to 300°C	min	148	145	47	67
Process duration (incl. holding time 30 min)	min (h)	239 (4)	247 (4,1)	132 (2,2)	146 (2,4)
Process times SPEED [1*]					
Max. programmable heating rate	°C/min	✖	✖	120	99
Shortest heating period to 1.500°C at 230V	min	✖	✖	16	27
Shortest cooling period to 750°C	min	✖	✖	8	19
Process duration (incl. holding time 30 min)	min (h)	✖	✖	54 (0,9)	76 (1,3)
Program control					
7-segment LED		✔	✔	✖	✖
4-lines LCD		✖	✖	✔	✔
Number of programmable stages		4	4	4	4
Program capacity		9	9	30	30
	Number of customizable programs	✖	✖	✖	✖
	Number of free programs	9	9	30	30
Special programs					
Drying		✖	✖	✔	✔
Heating-up ventilated		✖	✖	✔	✔
Service programs					
A-Temperature control [2*]		✔	✔	✔	✔
C-Purge heating chamber		✔	✔	✔	✔
E-Regenerate heating elements		✔	✔	✔	✔
Thermocouple					
PtRh-Pt, type S		✔	✔	✔	✔

Special functions

Emergency cooling system		✖	✖	✖	✖
RS 232 interface		✔	✔	✔	✔
Door lift		✖	✖	✔	✔
Shielding-gas supply		✖	✖	✖	✖
Timer function		✔	✔	✔	✔

Technical data

Power max.	W	1500	1800	3200	3800
Voltage range; frequency	V;Hz	220-240; 50/60	200-240; 50/60	200-240; 50/60	200-240; 50/60
Weight	kg	55	80	60	74
Dimensions W/D/H	mm	400/400/600	480/460/680	390/500/790	500/560/820

[1*] Process values: Sintering temperature = 1500°C; holding time = 30min; 1 x sintering tray **[2*]** only in conjunction with test-kit

METAL

TABEO-2/M/METAL-120
7201000005

HTS-2/M/METAL-120
7202000003

Details ✔ standard ✖ not compatible

Technical information

		TABEO-2/M/METAL-120 7201000005	HTS-2/M/METAL-120 7202000003
Heating-chamber height	mm	92	67
Sintering system	system size	 1 x 120 mm	 1 x 120 mm
Heating system			
Process capability		METAL	METAL
Max. temperature		1400°C	1400°C
Heating elements	type	MoSi2	MoSi2
	number	4	4
Values of process			
Max. programmable heating rate	°C/min	40	40
Program control			
7-segment LED		✔	✖
4-lines LCD		✖	✔
Number of programmable stages		4	4
Program capacity		9	30
	Number of customizable programs	4	4
	Number of free programs	5	26
Shielding-gas			
Shielding-gas consumption	liter/min	manually adjustable	manually adjustable
Shielding-gas supply		manually adjustable	manually adjustable
Thermocouple			
PtRh-Pt, type S		✔	✔

Special functions

Emergency cooling system		✖	✖
RS 232 interface		✔	✔
Door lift		✖	✔
Shielding-gas supply		✔	✔
Timer function		✔	✔

Technical data

Power max.	W	1600	2000
Voltage range; frequency	V; Hz	200-240; 50/60	200-240; 50/60
Weight	kg	80	56
Dimensions W/D/H	mm	530/460/680	390/500/790

HTS-2/METAL GLOW-120+

HTS-2/METAL GLOW-120+
7202000102

Technical Information

Heating chamber height	in mm	100			
Process capability		Glowing without shielding gas	Sintering system METAL Ø 100 *	Sintering system METAL Ø 120 *	System GLOW Ø 120
Usable chamber capacity		Ø 120 / 100 mm	Ø 70 / 15 mm	Ø 98 / 15 mm	Ø 120 / 70 mm
Heating system					
Process capability				SINTER METAL, SLS, MBJ	
Max. temperature	in °C			1400°C	
Heating elements	Type/ number			MoSi2 / 4	
Program control					
Max. rise in temperature	in °C/min			40	
Program capacity				30	
	Number of customizable programs			4	
	Number of free programs			26	
Number of programmable heating / cooling stages				9	
Shielding-gas					
Shielding-gas consumption	Liter/min			manually adjustable	
Shielding-gas supply				Start/Stop programmable	
Thermocouple					
PtRh-Pt, type S				✔	

* not included in the scope of delivery

Technical data

Power max.	W	3000
Voltage range; frequency	V;Hz	200-240; 50/60
Weight	kg	80
Dimensions W/D/H	mm	390/540/800

	Value	Commentary
Sintering process		Final hardening of a formed object made of a densified powder-based material by a firing process is called sintering. Porosity is decreasing while the density of the material is increasing and the object is shrinking. The temperature must be sufficiently high in order to achieve a hardening but must not exceed a certain limit that will lead to a deformation of the object.
Max. final temperature	°C	Maximum temperature that can be programmed.
Max. programmable heating rate	°C/min	Highest heating rate that can be programmed in a step. Depending on the power supply the actual heating rate may differ.
Shortest heating period	min	This is the minimum period of time that is needed to reach a certain heating temperature subject to ideal conditions. The size and quantity of the objects to be sintered may influence this period.
Holding time	min	This is the period of time during which a programmed temperature is constantly maintained.
Shortest cooling period	min	This is the minimum period of time that is needed to cool down to a certain temperature subject to ideal conditions. (May be influenced e.g. by ambient temperature)
Process steps	Number of steps	Maximum number of steps within a sintering process. One step comprises a change of temperature (rise or fall to a certain temperature within a determined period of time or with a certain heating or cooling rate, respectively) and a dwelling time that may also be “0”.
Process duration	min	Period of time from the start of a program until its end depending on the program parameters
SUPER SPEED	Process duration < 20 min	Sintering process with a max. duration of 20 minutes
SPEED	Process duration < 150 min	Sintering process with a max. duration of 150 minutes
CLASSIC	Process duration > 150 min	Sintering process with a duration exceeding 150 minutes

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DENTAL

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