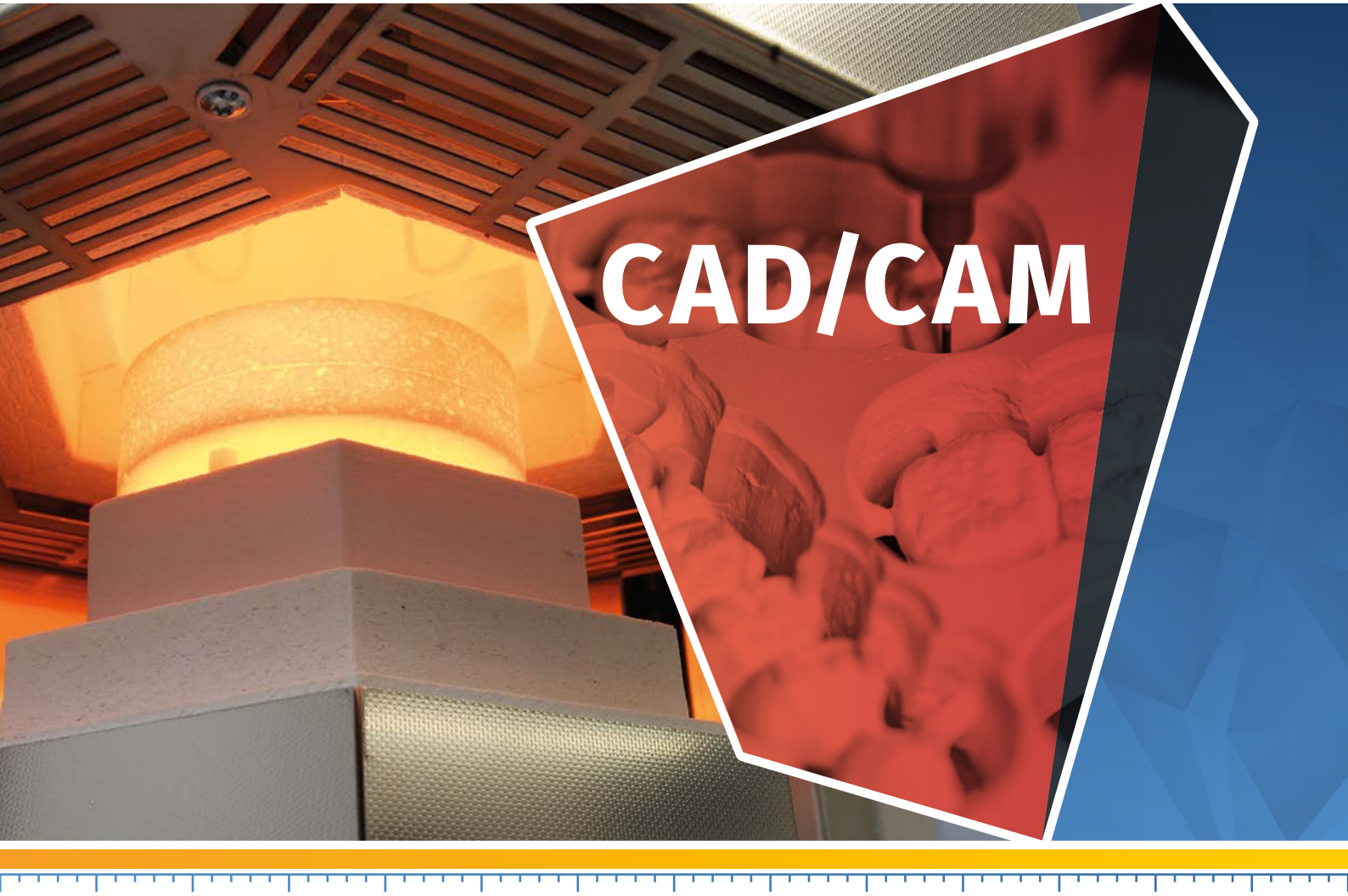
mihmvogt



MODEL OVERVIEW

Valid from 01.04.2017

MADE IN GERMANY

ZIRCONIUM

Details ✔ standard ✘ not compatible **Article number**

		TABEO-1/S/ZIRKON-100 9250	TABEO-2/S/ZIRKON-120 9260
Technical informations			
Heating-chamber hight	mm	42	92
Sintering tray		1 x 100/30 mm	3 x 120/30 mm
Heating system			
Scope/system size		CLASSIC	CLASSIC
max. temperature	Tmax.	1550°C	1550°C
Heating elements	type	SiC	SiC
	number	4	4
Process times CLASSIC [1*]			
Max. programmable heating rate	K/min	25	25
shortest heating periode to 1.500°C at 230V	min	63	58
shortest cooling periode to 300°C	min	124	143
Process duration (incl. dwelling time 30 min)	min (h)	217 (3,6)	231 (3,9)
Process times SPEED [1*]			
Max. programmable heating rate	K/min	✘	✘
shortest heating periode to 1.500°C at 230V	min	✘	✘
shortest cooling periode to 750°C	min	✘	✘
Process duration (incl. dwelling time 30 min)	min (h)	✘	✘
Program control			
7-segment LED		✔	✔
4-lines LCD		✘	✘
Number of process steps		4	4
Program numbers		9	9
	fixed programs	✘	✘
	Program numbers free	9	9
Special Programs			
drying		✘	✘
heat-up ventilated		✘	✘
Service Programs			
A-Temperature control [2*]		✔	✔
C-Purge heating chamber		✔	✔
E-Regenerate heating elements		✘	✘
Thermocouple			
PtRh-Pt, type S		✔	✔
Special functions			
Buffering of emergency-cooling battery		✘	✘
Port RS 232		✔	✔
Door lift function		✘	✘
Shielding-gas supply		✘	✘
Over-night programming		✔	✔
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*] Values of process: Sintering temperatur = 1500°C; holding time = 30min; 1 x sintering tray **[2*]** only in conjunction with test-kit

MoSi

TABEO-1/M/ZIRKON-100 9270	TABEO-2/M/ZIRKON-120 9280	HT-S 9500	HT-S SPEED 9501	HTS-2/M/ZIRKON-120 9550	HT 9600	HT SPEED 9601	HT-2/M/ZIRKON-120 9650

Technical informations

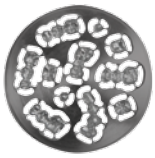
42	92	42	42	72	77	77	102
1 x 100/30 mm	3 x 120/30 mm	1 x 100/30 mm	1 x 100/30 mm	2 x 120/30 mm	2 x 120/30 mm	2 x 120/30 mm	3 x 120/30 mm
CLASSIC	CLASSIC	CLASSIC	SPEED CLASSIC	SPEED CLASSIC	CLASSIC	SPEED CLASSIC	SPEED CLASSIC
1650°C	1650°C	1650°C	1650°C	1650°C	1650°C	1650°C	1650°C
MoSi	MoSi	MoSi	MoSi	MoSi	MoSi	MoSi	MoSi
4	4	4	4	4	6	6	6
25	25	30	30	30	30	30	30
61	72	86	78	55	49	49	49
148	145	144	154	47	150	167	67
239(4)	247(4,1)	260(4,3)	262(4,4)	132(2,2)	229(3,8)	246(4,1)	146(2,4)
✕	✕	✕	99	99	✕	99	99
✕	✕	✕	39	25	✕	28	27
✕	✕	✕	15	18	✕	16	19
✕	✕	✕	84(1,4)	73(1,2)	✕	74(1,2)	76(1,3)
✓	✓	✓	✓	✕	✕	✕	✕
✕	✕	✕	✕	✓	✓	✓	✓
4	4	4	4	4	4	4	4
9	9	9	9	30	30	30	30
✕	✕	✕	✕	✕	✕	✕	✕
9	9	9	9	30	30	30	30
✕	✕	✕	✕	✓	✓	✓	✓
✕	✕	✕	✕	✓	✓	✓	✓
✓	✓	✕	✕	✓	✕	✕	✓
✓	✓	✕	✕	✓	✕	✕	✓
✓	✓	✕	✕	✓	✕	✕	✓
✓	✓	✓	✓	✓	✓	✓	✓

Special functions

✕	✕	✓	✓	✕	✓	✓	✕
✓	✓	✓	✓	✓	✓	✓	✓
✕	✕	✓	✓	✓	✓	✓	✓
✕	✕	✕	✕	✕	✕	✕	✕
✓	✓	✓	✓	✓	✓	✓	✓

Technical Data

1500	1800	1720	2000	3200	3100	3800	3800
220-240 / 50-60	200-240 / 50-60	200-240 / 50-60	220-240 / 50-60	200-240 / 50-60	200-240 / 50-60	220-240 / 50-60	200-240 / 50-60
55	80	58	58	60	78	78	74
400/400/600	480/460/680	390/500/780	390/500/780	390/500/790	500/560/810	500/560/810	500/560/820



METAL

MoSi

TABEO-2/M/METAL-120
9290

HTS-1/M/METAL-100
9570

HTS-2/M/METAL-120
9575

Details ✔ standard ✘ not compatible **Article number**

Technical information

Heating-chamber hight	mm	92	57	57
Sintering system		1 x 120 mm	1 x 100 mm	1 x 120 mm
Heating system				
Scope/system size		METAL	METAL	METAL
max. temperature	Tmax.	1400°C	1400°C	1400°C
Heating elements	type	MoSi	MoSi	MoSi
	number	4	4	4
Values of process				
Max. programmable heating rate	K/min	40	40	40
Program control				
7-segment LED		✔	✘	✘
4-lines LCD		✘	✔	✔
Number of process steps		4	4	4
Program numbers		9	30	30
	fixed programs	4	4	4
	Program numbers free	5	26	26
Shielding-gas				
Shielding-gas consumption/min	liter	manual configurable	1,1	manual configurable
Shielding-gas supply		manual configurable	system-controlled	manual configurable
Thermocouple				
PtRh-Pt, type S		✔	✔	✔

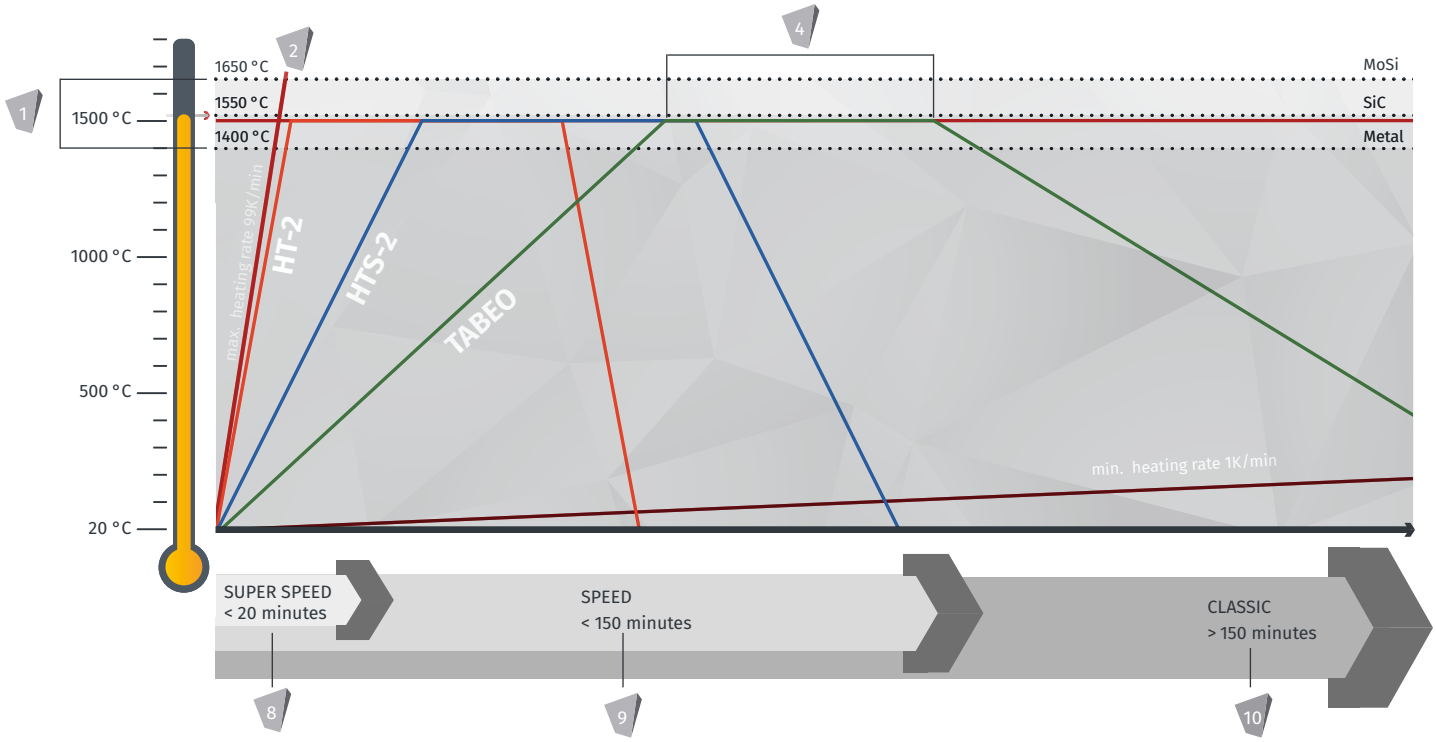
Special functions

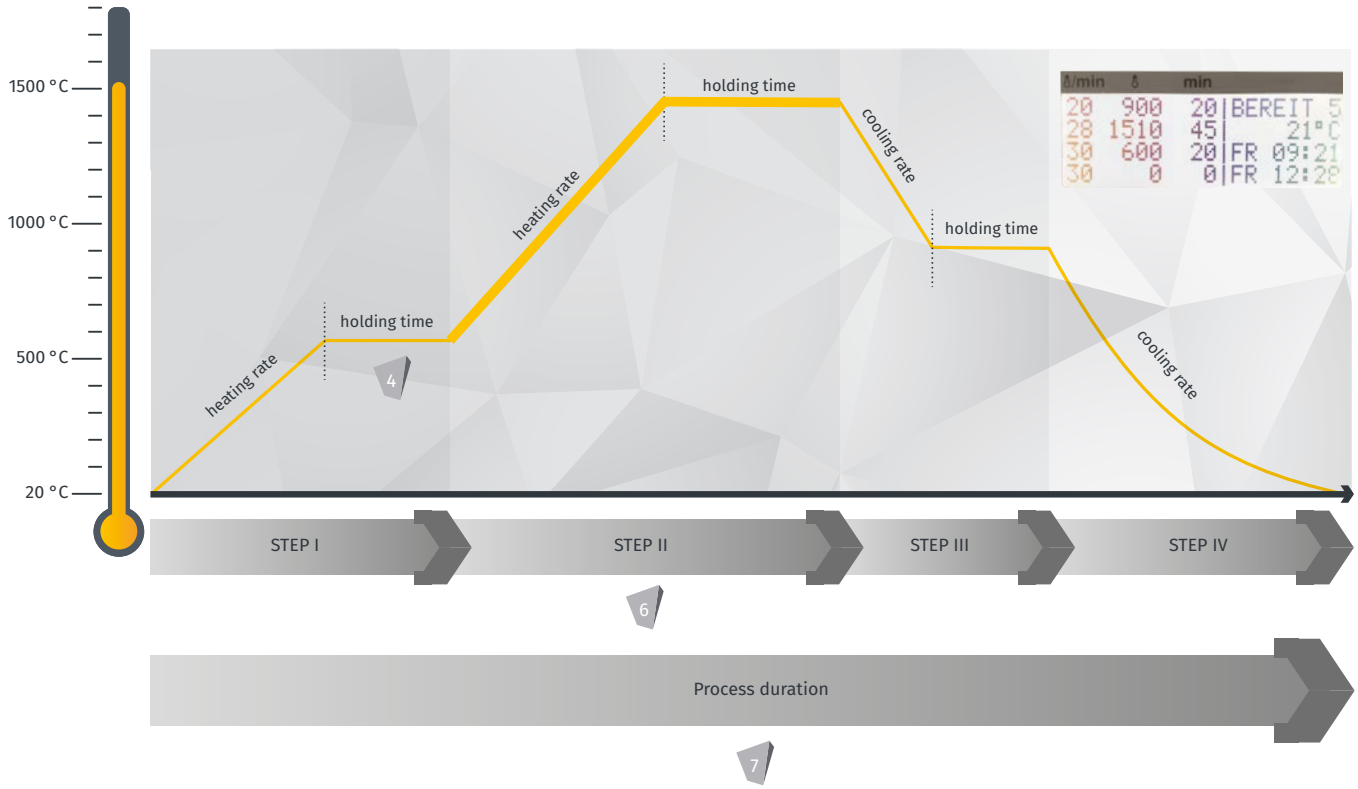
Emergency cooling for accumulator	✘	✘	✘
Port RS 232	✔	✔	✔
Door lift function	✘	✔	✔
Shielding-gas supply	✔	✔	✔
Over-night programming	✔	✔	✔

Technical Data

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

Comparisons of sintering procedures and program steps





Symbol		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.
1	**Max. final temperature**	°C	Maximum temperature that can be programmed.
2	**Max. programmable heating rate**	K/min	Highest heating rate that can be programmed in a step. Depending on the power supply the actual heating rate may differ.
3	**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.
4	**holding time**	min	This is the period of time during which a programmed temperate is constantly maintained.
5	**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)
6	**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".
7	**Process duration**	min	Period of time from the start of a program until its end depending on the program parameters
8	**SUPER SPEED**	Process duration < 20 min	Sintering process with a max. duration of 20 minutes
9	**SPEED**	Process duration < 150 min	Sintering process with a max. duration of 150 minutes
10	**CLASSIC**	Process duration > 150 min	Sintering process with a duration exceeding 150 minutes

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