



Celtra® Press System

Developed to make a difference

General firing guidelines

Celtra® Press

Celtra® is the new generation of high strength glass ceramics, zirconia-reinforced lithium silicate - ZLS.

The unique microstructure of ZLS allows outstanding physical properties, exquisite beauty, strength and speed. Celtra delivers exceptional performance, including optimized balance of translucency and opalescence, reduced crystal size which serves to increase flexural strength, and a fine microstructure for processing speed efficiencies.



General pressing and firing recommendations

Pressing programs

	Start	Heating rate	Final temperature	Holding time	Pressing time	Pressure
Crown, Inlay, Onlay	700 °C	40 °C per min	860 °C (100g ring) 865 °C (200g ring)	30 min	3 min	Depending on the press furnace
Bridge	700 °C	40 °C per min	870 °C (200g ring)	30 min	3 min	

Firing program Celtra® Ceram

	Drying	Closing	Pre-heating temp./ Vac. start	Pre-heating	Heating rate	Final temp./ Vac. stop	Holding with vacuum	Holding without vacuum	Cooling*
	min	min	°C	min	°C/min	°C	min	min	min
Power firing**	0	1	400	1	55	760	0	2	0
Cut-back									
1st Dentin & Enamel	2	2	400	2	55	770	1	1	5
2nd Dentin & Enamel	2	2	400	2	55	760	1	1	5
Glaze	2	2	400	2	55	750	0	2	5
Add-on (with and after glaze firing)	2	2	400	2	55	750	1	1	5
Fully contoured									
Power firing**	2	2	400	2	55	760	0	2	5
1st Glaze	2	2	400	2	55	750	0	2	5
2nd Glaze	2	2	400	2	55	750	0	2	5
Add-on (with 1 st glaze firing)	2	2	400	2	55	760	1	1	5
Add-on (after glaze firing)	2	2	400	2	55	750	1	1	5

* In furnaces that cannot constitute a cooling phase, it is recommended to cool down to 600 °C until removal of the object.

** Power firing is a firing program that is carried out before the first firing of the veneering ceramic layer. Power firing increases the flexural strength of the Celtra® Press restoration to more than 500 MPa.

Note:

1. Slow cooling is mandatory; this includes correction firings of restorations after try-in.
2. Firing temperatures must be adapted to the number of units fired in the same cycle.
 - a. 5 to 9 units require an increase by 5 °C to 10 °C;
 - b. 10 or more units require an increase by 10 °C to 20 °C.



Multimat NT/NTX

Pressing program

	Start	Heating rate	Final temperature	Holding time	Pressing time	Pressure
Crown, Inlay, Onlay	700 °C	40 °C per min	860 °C (100g ring) 865 °C (200g ring)	30 min	3 min	2,7 bar
Bridge	700 °C	40 °C per min	870 °C (200g ring)	30 min	3 min	2,7 bar

Firing program Celtra® Ceram

	Pre-drying	Drying	Pre-heating temperature	Pre-heating time	Heating rate	Vacuum level	Final temperature	Holding time*	Vacuum time	Tempering temperature	Tempering	Cooling**	
	min	min	°C	min	°C/min	hPa	°C	min	min	°C	min	min	
Cut-back	Power firing***	0	1	400	1	55	0	760	2	0	0	0	0
	Dentine 1	0	4	400	2	55	50	770	2	1	0	0	5
	Dentine 2	0	4	400	2	55	50	760	2	1	0	0	5
	Glaze	0	4	400	2	55	0	750	2	0	0	0	5
	Add-on (with and after glaze firing)	0	4	400	2	55	50	750	2	1	0	0	5
Fully contoured	Power firing*** includes												
	1st Glaze	0	4	400	2	55	0	760	2	0	0	0	5
	2nd Glaze	0	4	400	2	55	0	750	2	0	0	0	5
	Add-on (with 1st glaze firing)	0	4	400	2	55	50	760	2	1	0	0	5
	Add-on (after glaze firing)	0	4	400	2	55	50	750	2	1	0	0	5

* Hold time w/o vacuum

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Programat EP3000/5000

Pressing program

Standby	Heating rate $t\uparrow$	Final temperature T	Holding time H	Stopping speed E
700 °C	40 °C per min	860 °C (100g ring) 865 °C (200g ring) 870 °C (Bridge, 200g ring)	30 min	250

Firing program Celtra® Ceram

	Closing time min:s	Temperature gradient °C	Holding temperature °C	Holding time min:s	Vacuum on	Vacuum off	One-step program	Pre-vacuum	Long-term cooling °C	Cooling gradient	Stand-by temperature °C	
	S	t \uparrow	T	H	V1	V2			L	t \downarrow	B	
Cut-back	Power firing*	2	55	760	2	0	0	Yes	0	0	0	400
	Dentine 1	6	55	770	2	400	769	Yes	0	650	50	400
	Dentine 2	6	55	760	2	400	759	Yes	0	650	50	400
	Glaze	6	55	750	2	0	0	Yes	0	650	50	400
	Add-on (with and after glaze firing)	6	55	750	2	400	749	Yes	0	650	50	400
Fully contoured	Power firing* includes											
	1st Glaze	6	55	760	2	0	0	Yes	0	650	50	400
	2nd Glaze	6	55	750	2	0	0	Yes	0	650	50	400
	Add-on (with 1 st glaze firing)	6	55	760	2	400	759	Yes	0	650	50	400
	Add-on (after glaze firing)	6	55	750	2	400	749	Yes	0	650	50	400

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Zubler Vario 300

Pressing program

	Program type	Start temperature °C	Heating rate °C/min	Final temperature °C	Holding time min	Pressing time min	Pressure	Vacuum level mm	Opening time	Please calibrate the furnace before using. Silver Wire Test or calibration tool
Crowns etc.	Press	700	40	860 °C (100g ring) 865 °C (200g ring)	30	3	low	710	0	
Bridges	Press	700	40	870 °C (200g ring)	30	3	low	710	0	

Firing program Celtra® Ceram

	Program type	Start temperature °C	Pre-drying	Pre-heating time min	Closing min	Heating rate	Final temperature °C	Holding time min	Opening time min	Vacuum	Vac. start	Vac. end min	
Cut-back	Power firing*	400	Yes	1	1	55	760	2	0	No	no	no	
	Dentine 1	400	Yes	2	4	55	770	2	5	Yes	400	770	
	Dentine 2	400	Yes	2	4	55	760	2	5	Yes	400	760	
	Glaze	400	Yes	2	4	55	750	2	5	No	-	-	
	Add-on (with and after glaze firing)	400	Yes	2	4	55	750	2	5	Yes	400	750	
Fully contoured	Power firing* includes	standard											
	1st Glaze		400	Yes	2	4	55	760	2	5	No	-	-
	2nd Glaze		400	Yes	2	4	55	750	2	5	No	-	-
	Add-on (with 1 st glaze firing)		400	Yes	2	4	55	760	2	5	Yes	400	760
	Add-on (after glaze firing)		400	Yes	2	4	55	750	2	5	Yes	400	750

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Cergo Press

Pressing program

	Start	Vacuum	Increase	Final temperature	Holding	Pressing	Pressure
Crowns, Inlays, Onlays	700 °C	Cont	40 °C/min	860 °C (100g ring) 865 °C (200g ring)	30 min	3 min	4.5 bar
Bridge	700 °C	Cont	40 °C/min	870 °C (200g ring)	30 min	3 min	4.5 bar

Firing program Celtra® Ceram

		Drying		Closing		Pre-heating		Increase	Vacuum			Final temp.	Holding*		Tempering		Cooling**	
		°C	min	min	min	°C	min		°C/min	on/off/ cont	On/ °C		Off/ °C	°C	V min	min	min	°C
Cut-back	Power firing***	135	0	1	400	1	55	off	-	-	760	0	2	-	-	0		
	Dentine 1	135	2	2	400	2	55	cont	400	770	770	1	1	-	-	5		
	Dentine 2	135	2	2	400	2	55	cont	400	760	760	1	1	-	-	5		
	Glaze	135	2	2	400	2	55	off	-	-	750	0	2	-	-	5		
	Add-on (with and after glaze firing)	135	2	2	400	2	55	cont	400	750	750	1	1	-	-	5		
Fully contoured	Power firing*** includes																	
	1st Glaze	135	2	2	400	2	55	off	-	-	760	0	2	-	-	5		
	2nd Glaze	135	2	2	400	2	55	off	-	-	750	0	2	-	-	5		
	Add-on (with 1 st glaze firing)	135	2	2	400	2	55	cont	400	760	760	1	1	-	-	5		
	Add-on (after glaze firing)	135	2	2	400	2	55	cont	400	750	750	1	1	-	-	5		

* Hold time w/o vacuum

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Profire press

Press program

	Starting temp.	Heating rate	Final temp.	Holding time	Pressing time	Pressure
Crowns, Inlays, Onlays	700 °C	40 °C	100g 860 °C 200g 865 °C	30 min	3 min	2,7 bar
Bridge	700 °C	40 °C	200g 870 °C	30 min	3 min	2,7 bar

Firing program Celtra® Ceram

	Drying		Closing	Pre-heating		Vacuum			Heating rate	Final temp.	Vacuum time	Holding time*	Tempering		Cooling**	
	°C	min	min	°C	min	on/off/ cont	On/ °C	Off/ °C	°C/min	°C	V min	min	min	°C	min	
Cut-back	Power firing***	135	0	1	400	1	off	-	-	55	760	0	2	-	-	0
	Dentine 1	135	2	2	400	2	cont.	400	770	55	770	1	1	-	-	5
	Dentine 2	135	2	2	400	2	cont.	400	760	55	760	1	1	-	-	5
	Glaze	135	2	2	400	2	off	-	-	55	750	0	2	-	-	5
	Add-on (with and after glaze firing)	135	2	2	400	2	cont.	400	750	55	750	1	1	-	-	5
Fully contoured	Power firing*** includes															
	1st Glaze	135	2	2	400	2	off	-	-	55	760	0	2	-	-	5
	2nd Glaze	135	2	2	400	2	off	-	-	55	750	0	2	-	-	5
	Add-on (with 1 st glaze firing)	135	2	2	400	2	cont.	400	760	55	760	1	1	-	-	5
	Add-on (after glaze firing)	135	2	2	400	2	cont.	400	750	55	750	1	1	-	-	5

* Hold time w/o vacuum

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Notes



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22294/REV 2017-06

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