

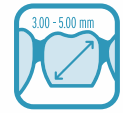
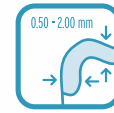
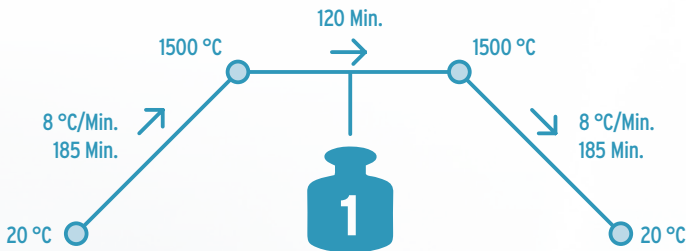
# Quick Guide

## Zirconia Sintering



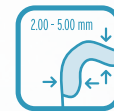
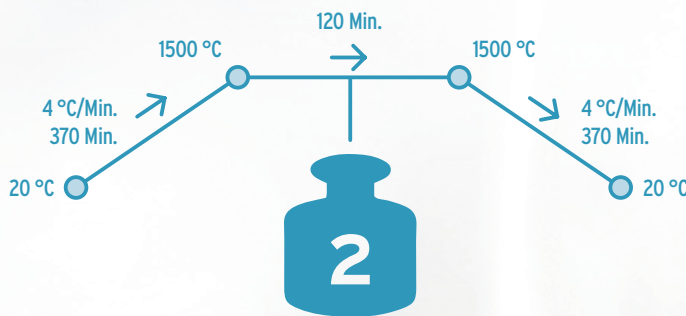
### TIPS AND HINTS

#### LIGHT CONSTRUCTION / SMALL MASS



Mass	Crown Thickness	Pontic Thickness
1	0.50 mm - 2.00 mm	3.00 mm - 5.00 mm
Heat/ Cool - Rate /min.		
8 °C		
Holding Time		
120 min.		

#### MASSIVE CONSTRUCTION / LARGE MASS



Mass	Crown Thickness	Pontic Thickness
2	2.00 mm - 5.00 mm	5.00 mm - 9.00 mm
Heat/ Cool - Rate /min.		
4 °C		
Holding Time		
120 min.		
Toronto:	Heat/ Cool - Rate /min.	
	4 °C	
Toronto:	Holding Time	
	150 - 180 min.	

#### STRENGTH VS. TRANSLUCENCY

Strength		Translucency	
1450 °C	1500 °C	1550 °C +	
DIN EN ISO 13356		OWN RISK	



- Higher sintering temperature will generate grain growth and raises the translucency.
- The grain growth will decrease the strength and increase the translucency.
- The result of a higher sintering temperature will be a bigger grain size and therefore a greater low temperature degradation.
- Zirconium is a poor heat conductor. The transport of energy in and out of the material takes time. (Lower the heat rates for massive constructions)
- Slow cooling can improve translucency and will work against tensions in the material.

