

Torch Work Fahrenheit Annealing Guidelines 1/8" -2" Thick Solid Work

FAHRENHEIT FIRING SCHEDULE (Ramps for work on mandrels in open air)								
HEATING			ANNEALING AND COOLING					
Step 1*			Step 2	Step 3		Step 4		
Target Temps >>	960° F		950°F	800°F		100° F		
Max Thickness in thickest dimension	Ramp (Rate /Hr)	Minimum Hold (Minutes)	Hold (Minutes)	Ramp (Rate /Hr)	Hold (Minutes)	Ramp (Rate /Hr)	Hold (Minutes)	Min Time (hours) (Steps 2, 3 & 4)
1/2"	300° F	15	30	150° F	0	300° F	0	7.6
1"	300° F	15	60	100° F	0	200° F	0	9.4
1½"	300° F	15	120	50° F	0	100° F	0	15.5
2"	300° F	15	160	25° F	0	50° F	0	26.3
2½"	300° F	15	200	18° F	0	36° F	0	32.1

*This loading hold temperature works for typical bead kilns with small doors. Kilns with larger doors allow more cooling when the door is opened. In this case, use a higher Step 1 temperature (for example, 1000° F) but always start Step 2, the pre-annealing soak, at 960°F.

FIRING STEP DEFINITIONS /OBJECTIVES	
Step 1	Heat glass, small pre-made components & kiln interior to the annealing point or slightly above. Hold through the loading period. If kiln is empty during heat up, heating AFAP is OK.
Step 2	Pre-annealing soak — after last piece is loaded. Equalizes temperatures throughout glass and kiln.
Step 3	Annealing ramp: slow cool through the annealing zone to below the strain point.
Step 4	Cooling ramp. Turn off at end. For work 1inch or thicker, wait to open kiln door until interior is 100°F or room temperature.