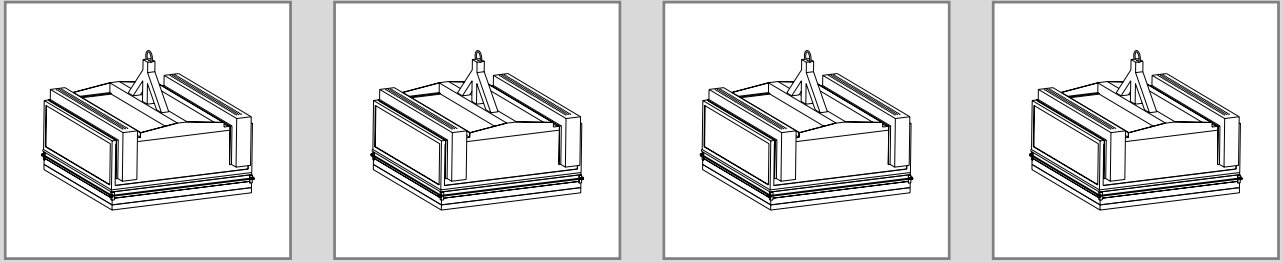


22. Large Casting and Slumping Kiln



The general profile for this kiln is wide and low. I have helped many individuals to develop their own special kiln shapes based on their specific needs. The questions go something like this: What are you going to make? Sculpture? Shower doors? Windows? It is a self-fulfilled answer. I have one customer who is making 8 foot diameter bowls that are 30 to 40 inches tall. These are gigantic lighting fixtures. But sometimes he makes a series of lower profile slumped and fused work. He uses a variable knee wall that can adjust height when needed. The maximum size of his kiln is 250 cubic feet. In this kiln he has placed elements in the ceiling and floor so he can modulate the heat evenly or disproportionately at will. A majority of kilns in this category will be 5 or 6 feet long by a little less wide by about 12 inches tall. Our design here is 52" x 52" x 16" tall (interior dimensions). Deciding upon a size is, believe it or not, one of the most difficult hoops to jump through, and that is behind us.

There are three parts to this project: the base, a movable kiln dome, and a power supply control center. There are many options as to what moves and what rolls. For example, we can build a typical system where the top section lifts to a clearance height and the base rolls out for loading and unloading. Another method is to just lift the top to a sufficient height for loading and unloading without rolling anything. And the third option is to have a permanent foundation/base with a rolling gantry. In this case the top and gantry roll together to a distance which allows easy loading and unloading. In all cases some mechanism must be developed to lift the top. Usually this is done by using a counter-weight and pulley system, like the old counter-weighted windows which would move effortlessly up and down with a push of the finger (well, unless the wood was swollen from summer's humidity, the only time you really needed the windows to open). Our example will be a lift

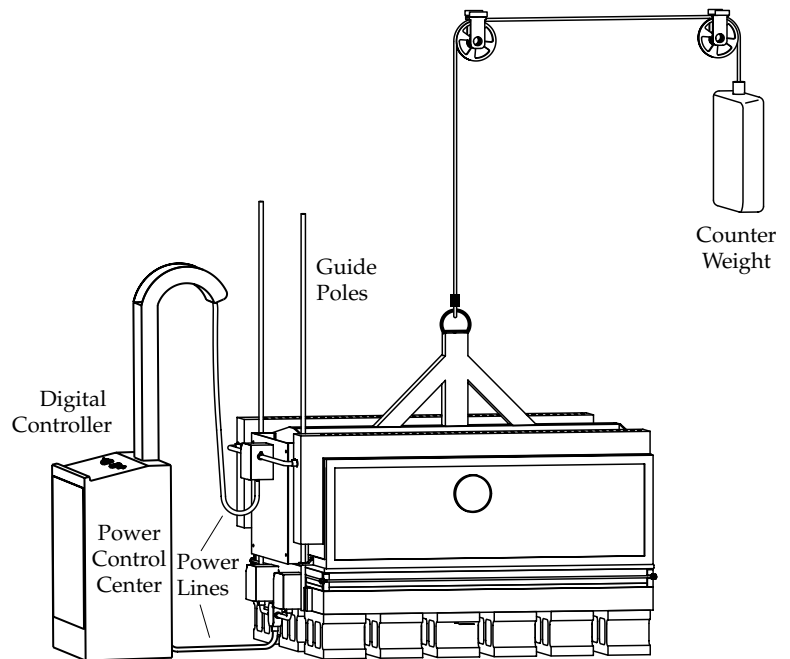


Fig. 22-01 This large "lift top" casting kiln has a pulley system with a counter balance which helps with the lifting. Also shown is the location of the power control center with connecting power lines to the kiln. The guide poles keep the "lift top" aligned with base.