



Controllers

A great help to the modern day potter / artist, as the modern controller allows the kiln to fire itself, leaving you to spend more time designing, making and marketing.

The modern controller offers a primary control system and secondary safety system. Should anything be noted, which is unusual or incorrect, the secondary control will shut the kiln down.

Modern controllers offer greater flexibility, with many more segments per firing / programme. A segment usually offers a ramp (set in °C / per hour) – how fast the kiln will rise or fall in temperature, a set point (or target temperature set in °C) and a soak (or brew time set in hours and minutes).

Controllers come in many different guises!

Blind controllers - usually offer a basic cut off and no temperature indication. A basic controller may be considered to be the Orton kiln sitter. This device utilises a mini bar (or small cone) that melts at temperature and the kiln sitter 'reads' this melt and turns / cuts the kiln off.

Ramp times on this device are set manually, so return visits to the kiln throughout firing are necessary.

Next up, would be a controller offering a 'cut off' or 'soak'. One dials in a temperature, choosing whether a switch is set to 'cut off' or 'soak', and the kiln will do whatever is set. Again these controllers require a manual power input to raise the temperature as required.

Some form of temperature display would assist either of the above controllers.

Next step up, would be to have a temperature display as well as a soak or cut off. This display could be analogue or digital. These controllers would still require manual input to raise the temperature, so again would require repeated visits throughout the firing to raise the temperature as required.

The obvious next step is for the controller to soak or cut off, show the kilns temperature and control the speed of the kiln to temperature.

There are many variations of these – some offer a selectable ramp, to a pre-set temperature, while others offer to a variable temperature, thereafter, selecting full power. Full power on some older or less well rated kilns might not be so bad, but on a kiln that is well rated or 'fast' might break

See firing guides.

The next level would be a controller offering, a ramp to first set point (temperature), a second ramp to the top temperature, a set (timed)

soak, and a set downward ramp to an end set point. These usually offer a delay to start, and go on to offer several programme/firings.

.... models (at early 2014), offer a segmented firing. The programme or firing being broken down into segments of a ramp (how fast the kiln goes to temperature set in °C) and an adjustable soak time. Multiple segments are then available to give great flexibility when added together.

Later controllers can offer a safety system, often switching a second relay contactor or solid state relay, if any of seven faults are detected in the firing, kiln or kiln room.

