

Choosing Your Electric Pottery Kiln

The biggest investment, apart from premises, when starting your own pottery is the kiln; at Potclays we are often asked “what kiln should I buy?” Before considering any other aspects of your requirements there are three factors that will help to narrow down your choice.

1. Cost

You might be tempted to buy a buying a second-hand kiln but unless you have knowledge of kilns or can get advice from someone who does it is hard to judge if there are hidden problems such as faulty electrics, program controller or heating elements, there could be substantial costs involved in getting the kiln serviced and repaired. Potclays offer a three year warranty on their kilns which gives you piece of mind.

Part of the cost consideration might be to compare front loading and top loading kilns; front loading kilns are more expensive because they must have a robust steel angle frame giving stability and to support the heavy door as it opens; in some models there are differences in the brick and insulation. The top loader configuration is much easier to build and does not need the heavy steel frame, in general top loaders and front loaders produce the same results.

2. Power supply

Smaller kilns up to 3kW can run off an ordinary 13amp three pin socket but anything requiring more than 3kW will need to be wired in to a more powerful supply, like a cooker socket. For larger kilns you will need to check your available power supply, most domestic properties have 100amps mains supply; the regulations prohibit more than two thirds being used for one appliance so the maximum available will be 63amps. Older properties and indeed some new eco-friendly houses may have a smaller power supply so it is important to check. There is a lot of scope with a 63amp supply, the largest Potclays make is a 237litre (8.4 cubic foot) kiln for this supply, that's big enough to support a very busy pottery business. Very large kilns require a three-phase supply; this is where the power supply is split into three live wires so you have five wires within the cable: a neutral, earth and the three live. If you haven't already got three phase in the property it will cost thousands to have it installed so it is not an easy option.

3. Space Available and Position

Check that you have sufficient space not only to position the kiln but to get the kiln into the property. When larger kilns are ordered, Potclays send a kiln delivery questionnaire that asks you to measure doorways, steps and other obstacles to avoid last minute problems in delivery. For top loaders you will need 20cm to 30cm around the kiln for airflow; if it is a front loading kiln it will need to allow 50cm behind the kiln for access to electrics inside the rear panel. Check that you are also allowing sufficient room to fully open the door; so the length required for a front loader is 50cm plus the length of the kiln plus the width of the door. You must have some ventilation in the room, kilns are like large storage heaters so you need constantly moving air to avoid overheating the room and to take away smells and fumes. While open windows might suffice for the smallest sizes, extract fans will be needed for larger kilns. It is most important when installing an extract fan that you provide a source of replacement air such as an air brick that allows a free flow of air into the room replacing air drawn out by the fan. Failure to provide replacement air will prevent the fan from working effectively and will cause a build up of heat and fumes in the room.

Another consideration in choosing your kiln is, what size pieces do you make and are you going to want to make bigger pieces in the future? If you are making small items, how many pieces do you want to fire at a time?

Capacity

When considering the size of work a kiln can take check the size of kiln shelves supplied with it; you would not normally want work to protrude beyond the edge of the kiln shelf. Kiln shelves are usually about 50cm smaller the kiln width to allow room to hold them while loading the kiln. When considering the maximum size of work that will fit on a shelf don't forget to allow space for props, the kiln furniture items that support shelves in a stack. You will find that about 50mm will be taken up by the props.

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We are frequently asked how many pieces can you get in a kiln? There isn't an easy answer to this question but using an average sized mug for example we can make a calculation. Slight differences in height may prevent you using another layer and differences in shape and diameter govern how many will fit on a shelf but as a very rough indication a mug takes up 2ltr to 3ltr, therefore in a 100ltr (3½ cubic foot) kiln you would get between 30 and 50 mugs.

We hope that has answered some of your questions in your search for a pottery kiln. Your next step would be to contact us at Potclays: We make kilns here in Stoke-on-Trent, and also offer a wide selection from other leading manufacturers too.

Disclaimer: Technical advice

Technical information/guidance is given in good faith by representatives of Potclays Limited. Trial and error is a fundamental part of ceramic practice and there are an infinite number of variables from application to application. Any suggestions must be user-tested for suitability before full production is undertaken and we cannot accept any liability whatsoever for unsatisfactory results arising from advice given.