



by Cameron G. Harman Jr.

Q *How do I decide when it's the right time to purchase a new piece of equipment, and how can I afford it?*

A The slow economy has forced everyone to proceed with extreme caution on any capital equipment purchase. But the economy won't remain slow forever, and your company must be in a position to compete when the markets rebound. Additionally, in many cases, the cost of new equipment is easily offset by the gains in quality and production efficiency it can provide.

There are three main reasons to purchase new equipment:

- Sales are growing and you need more capacity.
- You are experiencing too many losses from your present equipment.
- You want to create a new or higher-quality product.

Let's examine each of these individually.

Increasing Capacity

If your company is growing and cannot dry or fire enough product to meet demand, then you need a new kiln or dryer. However, the size of the equipment depends on the items being produced. For example, if you can turn* your existing kiln in 24 hours, your new kiln would not necessarily need to be larger in capacity if it could turn the same load in 12 hours. On the other hand, the cost of a larger kiln might be only slightly higher than a smaller kiln. Industrial-quality kilns and dryers are more expensive per cubic foot of capacity when they are small, since the

basic components are the same as in the larger kilns and dryers. For this reason, a larger piece of equipment offers the advantage of being only a little more expensive while allowing you to dry or fire much more product per turn.

For example, many tile makers say that it takes them three or four days to dry their tile sufficiently to be fired. A modern dryer might only take eight, 16 or 24 hours to dry the same load, depending on

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the tile size. By installing a modern dryer, a company can produce more tile in the same floor space because it does not have to set aside a lot of room for storing wet product. An additional benefit is that the tile are all dried to exactly the same degree of dryness, which eliminates firing problems due to uneven drying. The faster drying cycles also allow the company to significantly reduce its delivery times.

The same can be said for a modern kiln. If it can fire faster, the turnaround time can be reduced, enabling companies to reduce their delivery times to meet urgent orders.

Reducing Losses

Many production potters suffer from high product losses due to drying defects or incomplete drying. Other potters experience a high rate of firing losses due to under- or over-fired ware, cracked or warped ware, or discoloration. Potters with manually controlled kilns experience losses in profitability due to the high amount of labor required to continually "babysit" the firing operation. Modern kilns and dryers can significantly reduce and even completely eliminate these types of losses.

Improving Quality

Sometimes you must improve the overall quality of your product or develop a new product to better compete in your market. For instance, you might develop a new glaze or a reduction-fired piece that has to be fired in a carefully controlled atmosphere. Modern drying and/or firing equipment can help you meet these demands.

Evaluating the Cost

Once you've decided that a new dryer or kiln can help you improve your pottery production process, your next question will undoubtedly be, "How can I afford the new equipment?" If your sales are expanding, that is usually enough motivation for you to seriously consider purchasing the new equipment.

If you are experiencing a high rate of product losses, the monthly cost of new equipment is often less than the cost of remaking the bad ware. Even a modern, industrial-quality kiln can cost less than \$1500 per month, while an industrial dryer can cost less than \$500 per month.

*A "turn" is the total time it takes to turn over the product inside your kiln or dryer. That time is measured from the time the kiln or dryer door is closed until it is opened again after the heating and cooling processes are finished.

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Drying & Firing Q&A

It is also not uncommon for a company to be able to reduce its staff by one to three people after installing new equipment. One company did not have to replace an employee who left because its new dryer reduced losses to the point where that employee was no longer needed anyway. As a result, the company saved \$500 per month in labor costs, and it also experienced additional savings in waste reduction.

Sometimes the cost of operating new equipment is so much less that it can pay for the monthly equipment cost. For example, one production potter with an older, inefficient gas kiln was able to lower his gas bill from \$400 per burn to \$100 for two burns in a smaller, more efficient kiln. His savings were more than the \$1500 per month needed to pay for the lease on the new equipment, and he also got the benefit of faster firing, more uniform firing and no all night “babysitting” of the firing process.

No matter what your situation, it is important to remember that you do not have to finance the purchase of the equipment using cash. In many cases, you can either borrow the money from the bank for an equipment loan, or you can lease the equipment from the supplier or a leasing company.

Consider how much money you would save in materials, gas and electricity if you could reduce or eliminate your drying and firing losses. Also, look at how much your production space costs per square foot; with new equipment, you might not need additional floor space to expand your production capacity. Consider how much you would save in labor if your drying or firing process were fully automatic, consistent, fast and error-free. Many times the labor savings can be much higher than the cost of new equipment. Finally, remember that when the equipment is paid for, the total savings will go to your bottom line.

With all of these benefits, how can you afford not to invest in new equipment? 🌐

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