

## What type of Forge is best for you?

The anvil may be his usual trademark, but the **forge** (as the container for the fire) is the most important tool of the blacksmith. In turn, the most important aspects of the fire are its potential depth and air supply. The ability to understand and control the fire to suit the job at hand is the key to efficient forging.

When deciding what type of forge to buy or build, you need to consider the range of work that you want to do. A couple of bricks to contain your fuel on a steel table with a hair dryer blowing air into the fire will work just fine to occasionally heat small stock. A plough disc and a hand-crank blower will increase your options, but still may not allow you to mound sufficient fuel and supply enough air at the right times to heat longer lengths or weld heavier bar.

Overall shape is largely a matter of convenience, although you should ensure that the sides of the pan allow you to get stock deep into the fire. It is useful to have a pan big enough to keep extra fuel close at hand ready to pull into the fire, and provide room to push clinker out of the way as you work. If you regularly heat heavy bar or want to fire-weld, a firepot that will enable you to build a deep fire to concentrate the heat is essential. Fire bricks and clay work well, but crack and break up over time. Cast iron or fabricated steel firepots are effective for retaining heat and stand up to long-term use.

The air supply governs the way the fire burns. Today's electric blowers may not have the visual appeal of the large leather bellows sighing rhythmically beside the forge, but make life much easier for the smith doing the work. The T-shaped tuyere delivers air from the blower through the leg of the T, and allows ash to be dumped straight down the pipe connected to the base of the firepot. The air flow is managed by a slide valve where the tuyere connects to the blower, or by a control on the blower itself.

All these comments relate to solid fuel (coal/coke/charcoal) forges. These are the most versatile for general smithing, allowing you to take short heats, concentrate heat in a particular area of the stock, and reheat as required. As stock can be placed in the fire from any angle, you can still heat awkward shapes. Given an efficient fuel and air supply, fire-welding temperatures are easily attained.

A gas forge on the other hand is very clean to operate and due to its (generally) smaller size, can be more easily moved. Several bars can be heated at the same time, and left in the 'fire' without burning. You can also heat longer lengths (as long as the chamber). The main disadvantages are the inability to take short or localised heats, limited access to the chamber, and the difficulty of achieving the high temperatures required for forge welding. The roar of the flame is also much noisier than the blower on a solid fuel forge.

Many reference books include a section on setting up a forge.