



Figure 1: Forstner bit features.

Rim speed is not a factor with HSS Forstners. Turning the steel blue will not hurt them. They stay hard. However, there are several things you can do to keep your Forstner bits in top-notch condition.

First, maintain your bits in good condition and use them positively. A slight hesitation on entry will give you a clean hole, but once the surface is scored, the bit should be plunged as quickly as is prudent with your equipment. Because the rim controls the bit and allows you to make angled holes, overlapping holes, and all those other wonderful procedures possible with Forstner bits, you have to realize that there is a great deal of friction between the rim and the wood. To reduce the possibility of burning the wood, you should plunge the bit in a hole as fast as possible. A hesitant approach lengthens the time that the rim is rubbing, increasing danger of burning.

The second thing you can do is always keep your bits well sharpened and in good operating condition. Bits with dull chippers will feed erratically and will often plug. As received, your Forstner bit should be ready to use. You can improve them immediately by ensuring that the chipper face is smoothly polished (even waxed) for good chip ejection. They are quite smooth as they come from the factory, but a bit of honing with an Arkansas or Japanese stone can improve them. If you do this, be careful to hone directly on the flat so you do not affect the chipper bevel at all. If your bit is not clearing well, you will find that you will have to frequently remove it from the hole to clear the chips from the throat area. Because of their double chippers and the requirement for maximum rim area, these bits have more restricted throats than just about any other kind.

If the rim of your bit is dull, there are a couple of ways to sharpen it. You can sharpen it by using a coarse stone (either a half-round or a slip stone), followed up by honing with a fine stone such as a hard Arkansas or a 4000x water slip stone.

When you are sharpening the inside of the rim of a Forstner bit (or of anything else for that matter), you should never remove any more material than is absolutely necessary. Just scrape back until you have a clean edge and then hone.

If the chippers on your Forstner bit are also dull, they can be sharpened by stoning the throat face and bevel. Always maintain the original angles. This means that you must stone exactly parallel to the throat. Similarly, when you are stoning the bevel, maintain your stone parallel to the original bevel grind.

When you are sharpening the chipper bevel, be careful that you do not reduce the chipper height too much. As it comes from the factory, the Forstner bit will have chippers that are about 0.005" below the rim. It is desirable to have the chippers slightly lower than the rim so that the rim is severing the tips of any fibers before they are removed by the chippers. Obviously, if the chippers were higher than the rim, they would tear a ragged hole.

When you are stoning the inside of the rim, the chipper bevel or the throat, always maintain the original geometry of the bit. If you have to touch the exterior of the bit at any time to remove a burr, be careful that the stone is exactly parallel to the outside of the rim. You do not want to dimension the outside of the bit at all or you will change the hole size and cause numerous other problems in the operation of the bit.

Properly maintained, Forstner bits are among the handiest items that a woodworker can own. If you have any difficulty with these instructions, or if you have suggestions to make from your own experience, we would appreciate a note from you.



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