

**【Consultation**



What type of machining is a center hole drill used for? In my company, I use it as a positioning tool or a chamfering tool. What was it originally designed for?

**【Answer】**

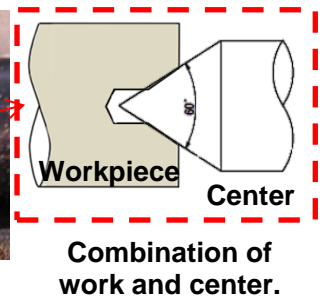
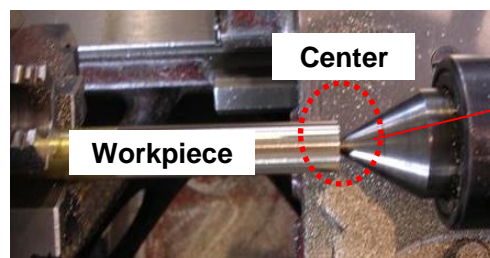
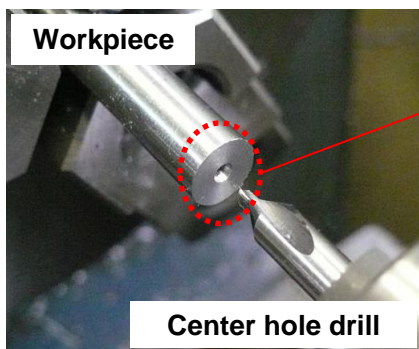
There are many companies using a center hole drill as a positioning tool or a chamfering tool, but originally it was developed as a cutting tool dedicated to machining a center hole. Please see the explanation



**【Description】**

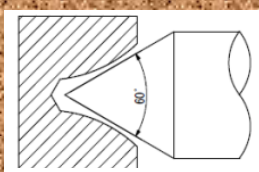
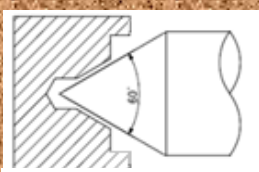
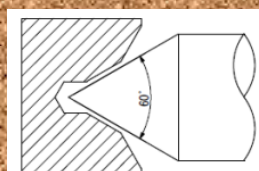
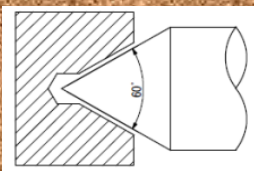


A center hole was originally used as the center on a lathe or a cylindrical grinder. The workpiece was clamped in a chuck, a collet or another center on one end and the other end was placed in a center for rotating the workpiece. This concept worked well to keep the workpiece on the same plane and on centerline. A pointed center for holding one end of the rotating workpiece was inserted into the center hole and the workpiece was rotated around this center while turning and grinding operations were performed.  
\* The picture below shows the machining of a center hole inserting the center into the hole.



The center is inserted in the center hole and it becomes the locating position of cylinder processing. You can imagine how many different types of center holes

**Type of center holes**



In addition to the usual 60° centers there are 90° and 75° standards for the angle of the center hole.

Within the 60° offering, there are several kinds of center hole shapes.

The A type center is commonly used.

The B type that also cuts a 120° chamfer angle at the beginning of the hole.

The C type has a form to also cut a counterbore.

The R type produces a radius countersink section instead of a straight angle.

※ Please refer to Type of Center Holes in the Yamawa catalog.

