



General Notes

Carbide insert drills work best in higher horsepower, rigid machines.

- The more rigid the machine, the more trouble free the drill will operate. A rigid machine reduces chatter, vibration and premature fracturing of inserts.
- Higher horsepower allows for higher feed rates. Higher feed rates yield faster cycle times and can reduce or eliminate stringy chips.

The slug produced by drilling through a workpiece can sometimes become jammed between the drill and workholding device. To minimize the likeliness of this happening, provide ample clearance in this area.

Methods of Holding and Alignment.

- TURNING CENTERS - A standard I. D. holder is sufficient. If using a DM or DZ style drill, make sure that the drill slot or holes are aligned with the coolant hole of the holder. Align the drill's inserts along the X-axis plane to control the drill size with the machine's X-axis offset.
- MILLING CENTERS - Use a standard end mill holder. Some shanks may need to be cut off for the shoulder of the drill to sit against the face of the tool holder.

Coolant

We strongly suggest thru-the-tool coolant on all our drills. This directs the coolant exactly where you need it. It also helps evacuate the large volume of chips created by the drill. A normal coolant pump should be sufficient to deliver enough coolant for the chip evacuation. Flood coolant is acceptable when the drilling depth does not exceed a 2:1 ratio to the diameter.

Note: On some CNC machines, the rapid rate of tool positioning does not allow enough time for coolant flow to begin prior to drill contact with the workpiece. If the drill begins cutting without coolant, even for a second or two, insert life can be shortened considerably. Adding a short dwell in the program, to assure coolant flow **before** workpiece contact, will greatly enhance insert life and drill performance.

Programming Tips

We do not recommend pecking of the drill in short hole applications or when the drill is in the vertical position. Chips may fall to the bottom of the hole and pinch between the insert and hole bottom, possibly fracturing the insert. Use a pecking method only if you are using the drill to its maximum depth and/or you are experiencing stringy chips.

A simple method for reducing stringy chips is to create a small loop program which allows the drill to pause every .025-.050 depth. This method breaks up the stringy chip and allows the coolant to evacuate the chips.

It is possible to bore with the drill, but we do not recommend it. The drill is designed for cutting from solid. If the inserts are oriented correctly, you can slightly offset the drill to achieve a desired size. Call our technical support at 1-800-438-1538 and we would be happy to assist you.