Technical Tip #128 – CV, DV, and BT Toolholders

CV, DV and BT tapers are all identical and known as 7/24 tapers. These tapers are commonly referred to as a “self-releasing” or “fast tapers.” The primary differences between the toolholders are the flange design and retention knob threads.

**CV Toolholders**
CV is often referred to as “CAT” or Caterpillar V-flange tooling as described under ANSI B5.50, and typically has inch threads for the retention knob. Some CV holders have a counter bore for a piloted retention knob. This is typically used in higher spindle speed applications.
**BT Toolholders**
The BT taper is a JIS B6339 specification (Japan Industrial Standard). BT tooling carries a wider flange than a CV or DV tool and contains metric retention knob threads.
**DV Toolholders**

The DV taper is specified under DIN69871 (Dutch Institute of Normalcy). The DV tool is very similar to a CV toolholder, but has a V-shaped orientation notch that is perpendicular to the groove that is machined in the diameter of the flange. DV toolholders also contain metric retention knob threads.

![DIN 69871 DV Form A](image)

CV tooling is the most utilized tooling in North America, but machine builders globally generally build their equipment based on the specification of the country of origin.

Although the tapers are identical between the CV, DV, and BT toolholders, they are not interchangeable with one another because of the variations in flange dimensioning. Because the tool changer arm uses the flange to grab onto to index the tool, therefore damage could occur if you tried to interchange the tools.