

## Spindle Ordering and Maintenance Tips

### Stopping On a Dime

In some applications, it can be of vital importance to stop a spindle very quickly. For some operators, safety is the main concern; for others, it's helping to reduce cycle time. In any case, there are industry proven methods to stopping a spindle in seconds...or less.

In all cases, a variable frequency drive (VFD) must be used. To stop a spindle's rotation, the VFD converts physical energy into electrical energy and dissipates it through built-in resistors. To accomplish this, the VFD takes large increases in load. If the VFD was not sized properly for the spindle it is driving, the drive could trip, which would allow the spindle to rotate freely. To avoid this problem, engineers must provide a VFD that is much larger (and more expensive) than what would be normally required.

A better solution does exist and it involves the use of a braking package. Normally including a brake chopper and a brake resistor, the braking package works in tandem with a properly sized VFD to dissipate unwanted energy and stop the spindle as quickly as possible. In this configuration, the spindle's rotational energy is "chopped up" into more easily digestible amounts that are then dissipated through the brake resistors. For example, a 1 HP spindle running at 15,000 RPM with a VFD and braking package can be completely stopped in less than 1 second.

For more information, contact one of our friendly spindle associates at 847.680.8833 today!