# Spindle warm up process

**Applying load to a cold spindle will cause premature failure of bearings.** To avoid this, one must run the spindle at a minimum of 9,000 rpm for 10 minutes or until the spindle bearing supports reach about 98 degrees F. This allows bearings, supports and shaft to reach their designed dimensions.

It's been recommended that a ramping warm up be used to ensure long life to the spindle bearings.

## Warm up routine

Start the spindle at 150 Hz (9000rpm) for 4 minutes

Increase to 200 Hz (12000rpm) for 2 minutes

Increase to 250 Hz (16000rpm) for 2 minutes

Increase to 300 Hz (18000rpm) for 2 minutes

You can shut down the spindle at this point. If you do not used the spindle to run a job within 10 min of the warm up you should rerun the warm up. You can use the temp indicator on the side of the spindle to understand the spindle temperature and if it is at or around 98deg or higher, you should not need to run the warm up again.