

## Recommendations for Safe Operating Conditions for Hardinge 5C Cast Iron Spindle Tooling

### Cast Iron Step Chuck Closers:

Spindle Tooling	Recommended Speed	Recommended Draw-bar Force
2", 3", and 4" Step Chuck Closers	Less than 5000 rpm	Less than 5000 lb
5", and 6" Step Chuck Closers	Less than 4000 rpm	Less than 5000 lb

### Cast Iron Face Plates and Fixture Plates:

Maximum surface speed of 6000 fpm with allowances made for LOAD ECCENTRICITIES, CLAMPING FORCES and STRESS CONCENTRATIONS. Operator discretion is needed because precise guidelines cannot be established due to the uncertainties in operating conditions. All rpm recommendations listed below result in surface speeds of less than 6000 fpm. The following is a rough guideline.

Spindle Tooling	Recommended Speed
3" Fixture Plates	Less than 3500 rpm
5" Fixture Plates	Less than 3000 rpm
8.875" Fixture Plates	Less than 2000 rpm
5" Jaw Chuck	Less than 3000 rpm
6" Jaw Chuck	Less than 2500 rpm
7" Face Plate with angle plate	Less than 2500 rpm
9" Face Plate with angle plate	Less than 2000 rpm

**SAFETY INFORMATION  
PLEASE READ CAREFULLY**

**NOTE: All tooling is to be free of defects and is assumed NOT to be weakened by usage.**