TECHNICAL INFORMATION

SETTING THE SPINDLE SPEED

To calculate the correct speed the following metric formula can be used

$$\text{RPM} = \frac{1000 \times \text{Surface speed in Metres per Minute}}{3.14 \times \text{Diameter in millimetres}}$$

Approximate surface speeds for carbide tools — **Metres per minute**

Material	Roughing	Finishing
Mild Steel	50	80
Cast Iron	40	60
Aluminium	80	100
Stainless Steel	40	50

Example 1.
20mm Mild Steel bar to be rough machined

$$\text{RPM} = \frac{1000 \times 50}{3.14 \times 20\text{mm}} = \frac{50000}{62.8} = 796\text{rpm}$$

Example 2.
20mm Mild Steel bar to be finished machined

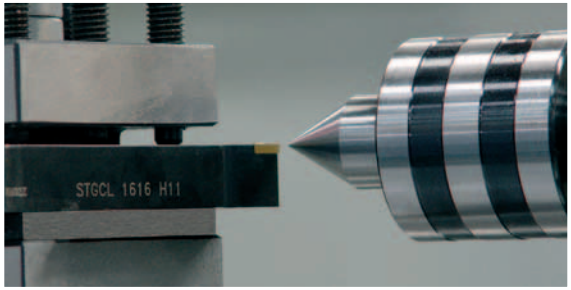
$$\text{RPM} = \frac{1000 \times 80}{3.14 \times 20\text{mm}} = \frac{80000}{62.8} = 1273\text{rpm}$$

- **Set the spindle speed to the closest speed to the RPM calculated**
- **If in doubt then set a speed slower than the calculated speed**

SETTING THE TOOL ON CENTRE

For the tool to cut correctly it needs to be set on centre. This can be best achieved by placing a centre in the tailstock and packing the tool until the tool is on centre.

Correct centre height



Incorrect centre height