

## **Compare CNC to Non-CNC Machine**

- CNC machines require less skill to run once they are setup.
- Manual machines are more versatile
- CNC machines are safer because they are fully guarded
- Manual machines require a high level of skill to set and operate.
- CNC machines are more accurate and repeatability is really good.

This means that once a part is set the machine is capable of producing many more accurate parts.

- Repeatability means a machine can keep producing parts to the same degree of accuracy.
- CNC machines are cleaner as they are fully guarded.
- Some modern tooling cannot be used on manual machines because of the power and stability that is required.
- Manual machines are good for training, because the operator will get more of a feel for the material and cutting tools.
- CNC machines take longer to set-up because a CNC program is required and all the tools have to be measured and set.
- CNC machines can use high pressure coolant which vastly improves tool life. This is very difficult to do on a manual machine.
- CNC machines can be robot loaded.
- CNC machines are a lot more expensive than manual machines.
- One person can very often operate several CNC machines at once.
- The time to produce a component on a CNC machine is often up to ten times quicker than a manual machine.
- Manual machines only cut in straight orthogonal lines. CNC machines can cut at any angle. CNC machines can move in a circular motion. In fact, a CNC machine can be programmed to produce any shape.