CNC Machining

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https://www.cnccode.com

What is CNC Machining?

CNC machining can be defined as a process in which pre-programmed computer software dictates the movement of factory machinery and tools. As a result, manufacturers can produce parts in less time, reduce waste and eliminate the risk of human error.

This manufacturing process is used to control a wide variety of complex machinery, which will be discussed in this article. Essentially, CNC machining makes it possible for three-dimensional cutting to be completed by following one set of prompts.

The Different Types of CNC Machines

CNC machines are designed to manufacture a wide variety of items. As such, there are several different types of commonly used CNC machines.

It’s important to know that these are not your average machines. They require the skills of a trained professional to be able to produce high quality commercial products. All of the following machines use G-code, which is the language that a CNC machine understands. Each type of CNC machine caters to a specific purpose.

CNC Milling Machine

One of the most common types of CNC machines, a CNC mill utilizes computer controls to cut various materials. Mills can translate specific programs of numbers and letters in order to move the spindle in various ways.

Many mills use what is known as G-code, which, as mentioned, is a standardized programming language recognized by most CNC machines. A CNC mill can have a wide array of functions, such as face milling, shoulder milling, tapping, drilling and turning. Most CNC mills come in three to six-axis configurations.

A CNC mill is very large compared to other tools and can be quite costly. Some CNC milling machine manufacturers include Okuma, HAAS and DMG Mori.

CNC Lathe

A lathe is a CNC machine that functions to cut work pieces as they are rotated. CNC lathes can make precise cuts quickly by using various tools.

These CNC machines are quite effective in the precision they

offer compared to manual lathes. They often have fewer axes than CNC milling machines, and are therefore smaller in size and more compact.

CNC lathes come with similar controls to those of CNC mills and can read both G-code and other proprietary programming languages. Some of the most common CNC lathe machine manufacturers include HAAS, Mori Seiki and Okuma. The framework of CNC lathes is similar to manual lathes.