

C6 Lathe Starting Guide



Introduction

Congratulations, your new lathe is extremely versatile and will provide you with many years of enjoyable service. The CNC functionality, although slightly complicated on the surface, is extremely easy to use once you're familiar. Complicated radius cuts almost impossible by hand are a breeze with CNC. No more will you have to fumble around with gear changes or guesswork with CNC threading. If you've never worked with machinery or CNC machinery before, it is advised that you take things in baby steps. Be patient with yourself in a learning process leading up to great productivity. At times you will feel like throwing tools across the room but this is not a foreign or uncommon feeling when learning a new and complicated subject.

Uncrating and cleaning

The machine is heavy, please use some common sense when moving or locating your machine onto a level working surface. If you do not have people to help you the use of a "cherry picker" and some straps make light work.

It is **extremely** important that you get your machine clean before starting operations. The machine comes from China, across the water, with large amounts of paraffin wax on the working services and the ball screws. If you do start operations with this material on the machine you will notice that you start to have extreme slowdowns in your traverse speeds and may even stall the steppers trying to overcome the wax that is packed in the ball nuts. The easiest way to clean the machine is using clean rags, denatured alcohol or acetone, or any other light petroleum product. What you will have left is bare metal surfaces. These surfaces are now open to the air and prone to corrosion. Using way oil (or hydraulic oil in a pinch) cover your working surfaces with a light film. Ball screws use light #1 oil such as

WD-40 or like product. Ball screws are very low maintenance and require only a wiping down and a light coating from time to time.

After the machine is cleaned you are near operational condition. The only thing left to do on the lathe is your fine adjustments. Tune your tail stock to your headstock, square off your turret at and cross slide.

You'll also want to locate your control box unit in a space where it will be free from the majority of the swarf. It also is convenient if the face of the unit is towards you so you have easy access to the E-Stop button and visibility to the function lights. Connections are made by connecting the appropriate ends to the labeled output on the back of the controller. Both the lathes and the controller use 110 V single phase common household connections. Since you will be powering a PC, lathe, and controller from the same circuit please make sure your circuit is **at least 15 amps** and can have dedicated use of that circuit while in operation. After this you are prepared to chuck up some stock and start some test cuts.

The lathe is compatible with several PC-based controller products. However, you'll notice in the manuals that the controller that is referenced is the Mach 3 product. While we have experience with this product we do not have experience with all products and therefore some effort on the owners' part is going to be required if using a different product.