

Rotary attachment guide

This document provides information for correctly setting up the rotary attachment settings on machines that use Laserwork software (AKA RDworks), ie. those with Ruida controllers.

There are 3 primary parameters that will affect the output:

- **Diameter** (of the object in the rotary attachment)
- **Y - axis step length** (can be found under “Vendor Settings” in the “File” Menu. The password is RD8888. Remember to click on “Read” before checking the Y - axis value because you want the value actually stored on the machine - not the software.)
- **Circle Pulse** (The amount of “lines” for the required diameter. This is worked out to a formula - shown below.)

To set up the correct Circle Pulse when using a rotary attachment on Laserwork (RDWorks) machines, use the following formula :

$$3142 * [diameter] / [y-axis step length] = [Circle Pulse]$$

So, if the bottle/glass/whatever has a diameter of 73.3mm, which is the diameter of a standard wine bottle, and the machine's Y - axis step length is 7.2 (most of them - but check it in Vendor Settings, don't forget to READ), the calculation will be :

$$3142 * 73.3 = 230308.6$$

$$230308.6 / 7.2 = 31987.3$$

You can round this to 31987, and that is the number you enter as the Circle Pulse.

NOTE : The settings shown are provided as a guideline and may need to be slightly tweaked, depending on the machine settings. This guide also assumes that the X and Y - axis step length settings have been correctly calibrated to start with.

Be aware that the “Enable Rotary” settings on some of the V8 Laserwork (RDWorks) software is greyed out under “Output”. If this is the case, you will find the settings under “User” at the bottom. In this case, don't forget to first click on “Read”, and then once you have made the changes, “Write” to the machine. For whatever reason, the Circle Pulse defaults to 1000, and the Diameter to 20mm. This will give you a badly distorted image.

