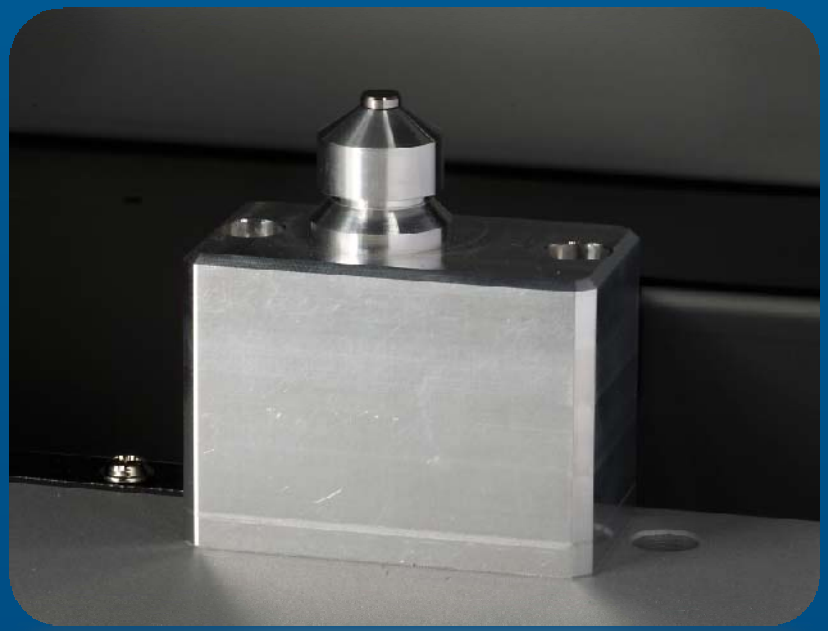
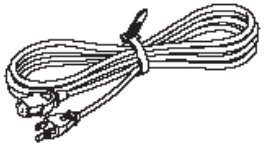
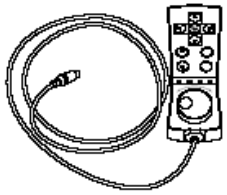
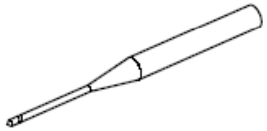
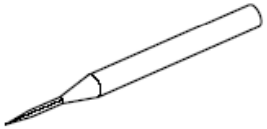
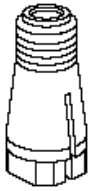
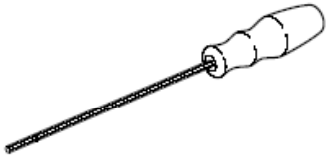
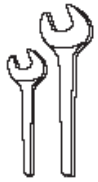
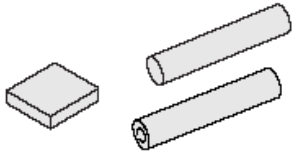
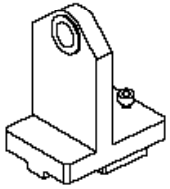


JWX-30 Setup

What's Included

- **All items included**

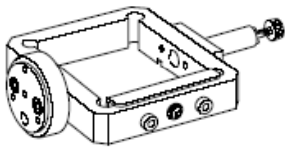
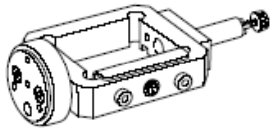
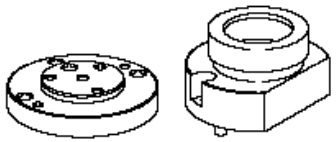
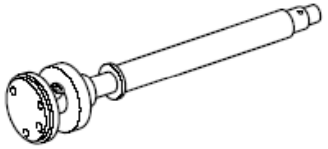
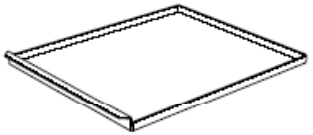
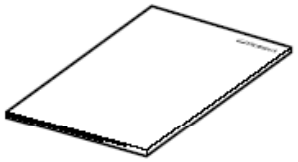
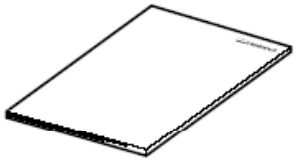
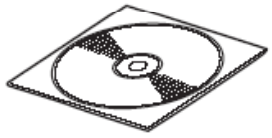
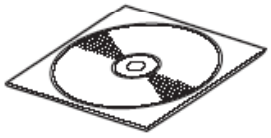
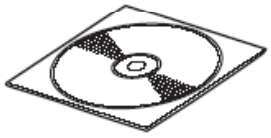
 Power cord	 Handy panel	 Tool for modeling (ball end mill)	 Tool for modeling (conical end mill)
 Collet (φ 3.175 mm)	 Detection pin	 Hexagonal driver	 Hexagonal wrench
 Cap screws	 Spanner (10 mm, 17mm)	 Modeling wax	 Clamp holder

NOTES:

•Please be familiar with the names of all the accessories listed here.

What's Included Cont.

- **All items included**

 Square clamp (large)	 Square clamp (small)	 Swivel clamp*	 Tube clamp*
 Dust tray	 Blower fan	 User's manual (this document)	 SRP Player Installation and Setup Guide
 SRP Player CD-ROM	 Roland Software Package CD-ROM	 Roland JewelStudio DVD-ROM**	

NOTES:

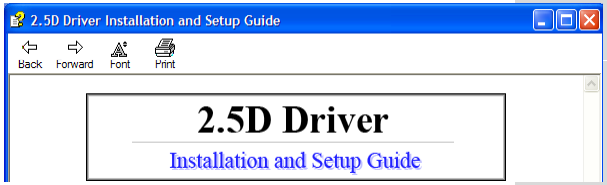
•Please be familiar with the names of all the accessories listed here.

JWX-30 Drivers Install

Driver Install

- Insert drivers CD.
- Click on Windows Driver and click Install.

- Follow setup guide for your Operating System.



Vpanel Install:

- Click on Vpanel for JWX-30 and click Install.

NOTES:

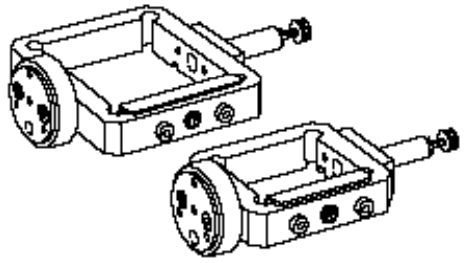
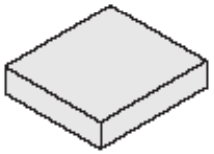
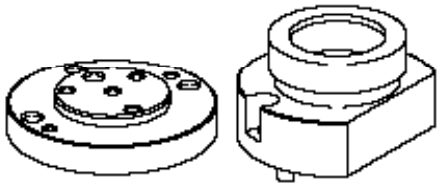
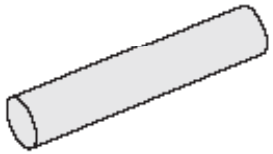
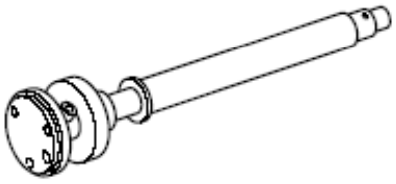
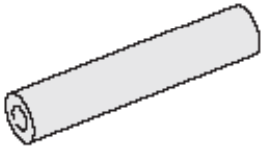
Spindle Break In

- **Spindle will need to be broken in, or run in, under the following conditions.**
  - When using spindle for the first time.
  - After moving machine and reinstalling.
  - After replacing the spindle unit.
  - When used in low temperature area.

- **Break in or run in spindle in 3 steps.**
  - Step 1
    - Speed: 6,000 RPM
    - Run Time: 20 minutes
  - Step 2
    - Speed: 15,000 RPM
    - Run Time: 20 minutes
  - Step 3
    - Speed: 30,000 RPM
    - Run Time: 20 minutes

NOTES:

Fixture's Use

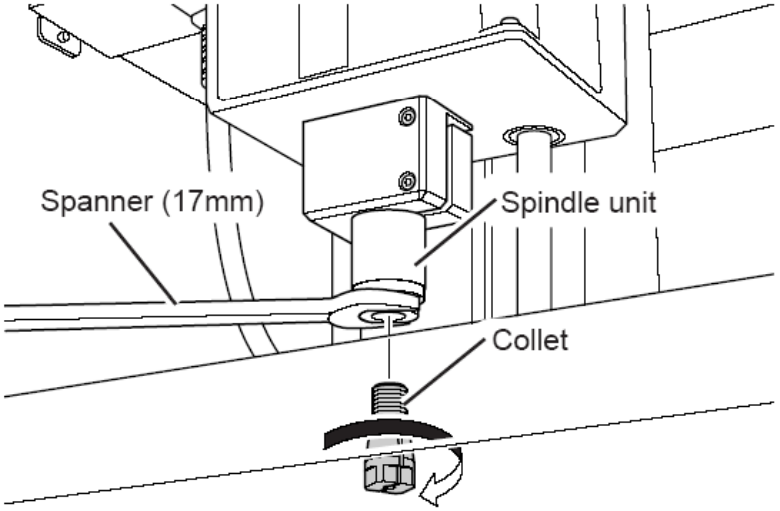
Type of jig	Loadable workpiece shape*	Example of object created
Square clamp (large, small) ☞ P. 59, "Using the Square Clamp" 	☞ P. 60, "Square Clamp: Workpiece Size and Cuttable Area" 	Rings, brooches, etc. 
Swivel Clamp ☞ P. 71, "Using the Swivel Clamp" 	☞ P. 72, "Swivel Clamp: Workpiece Size and Cuttable Area" 	Chaton settings, etc. 
Tube Clamp ☞ P. 84, "Using the Tube Clamp" 	☞ P. 85, "Tube Clamp: Workpiece Size and Cuttable Area" 	Rings, etc. 

NOTES:

- The fixture used will be determined by the object or model created.

Setup Basics – Installing Tool

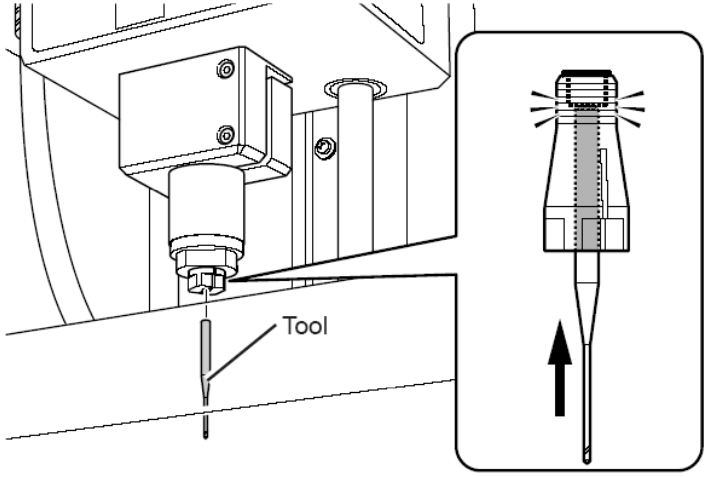
- Follow the below steps for installing the collet, tooling, and using the two spanner wrenches.
  - Install the collet loosely. Use the 17mm wrench to hold the spindle in place as you install the collet until it is finger tight.



NOTES:

Setup Basics – Installing Tool

- Insert tool until it stops. There is a magnet inside the collet that will “hold” the tool. Approximately 30 mm should be extended out from the collet



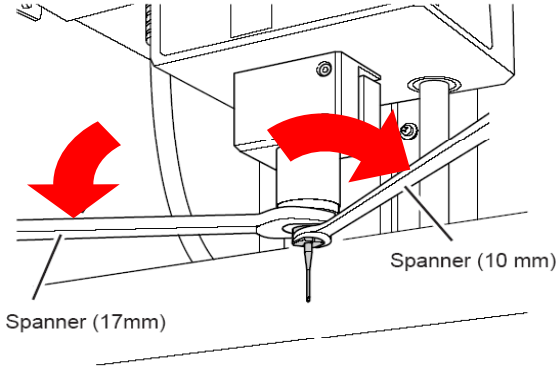
- Follow the same steps for the detection pin.

NOTES:

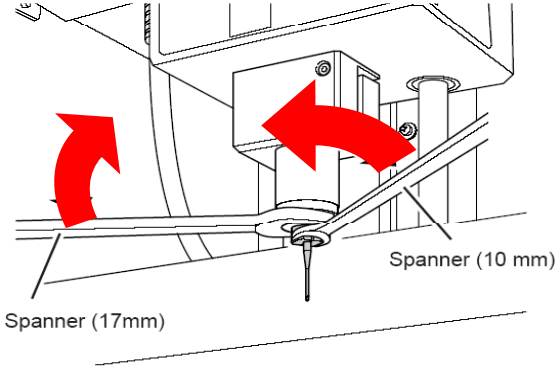
•To prevent tool from accidental breaking, you can place an item below the tool should the tool accidentally fall.
•For example, a piece of wax.

Setup Basics – Installing Tool

- To tighten the collet, use both spanners to tighten the collet.
- TIP: Use the 17mm wrench in the left hand and 10mm wrench in the right hand. Pull the wrenches away to **tighten** the collet. Tighten to about 3.2 N-m of force.



- TIP: To **loosen** the collet, again with the 17mm wrench in the left hand and 10mm in the right hand, pull the wrenches towards each other.

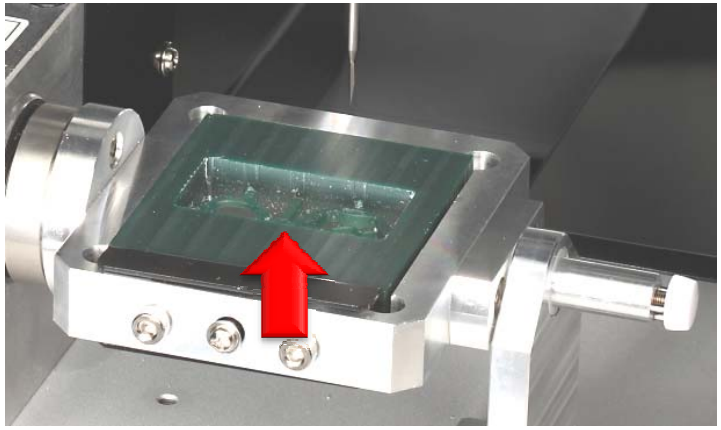


NOTES:

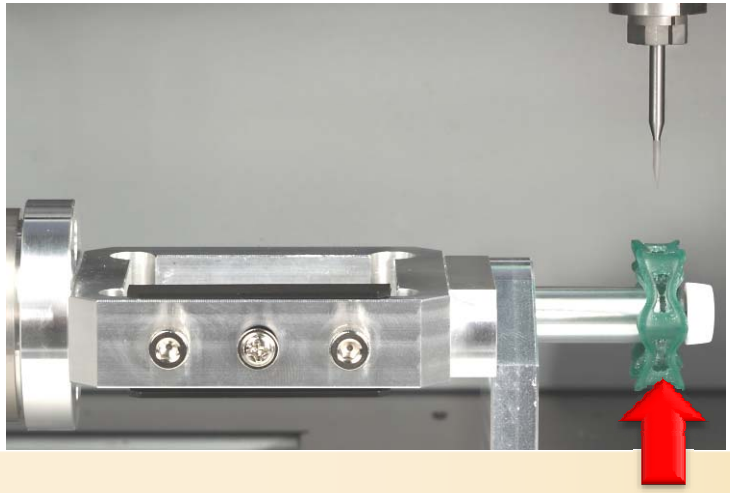
- These basic tool installation steps will be used various times during setup and the model creation process.
- With time and practice, these steps can be performed in a few seconds.

Setup Square Clamp

- What the square clamp will be used for
  - Two sided cutting using "**frame center**".



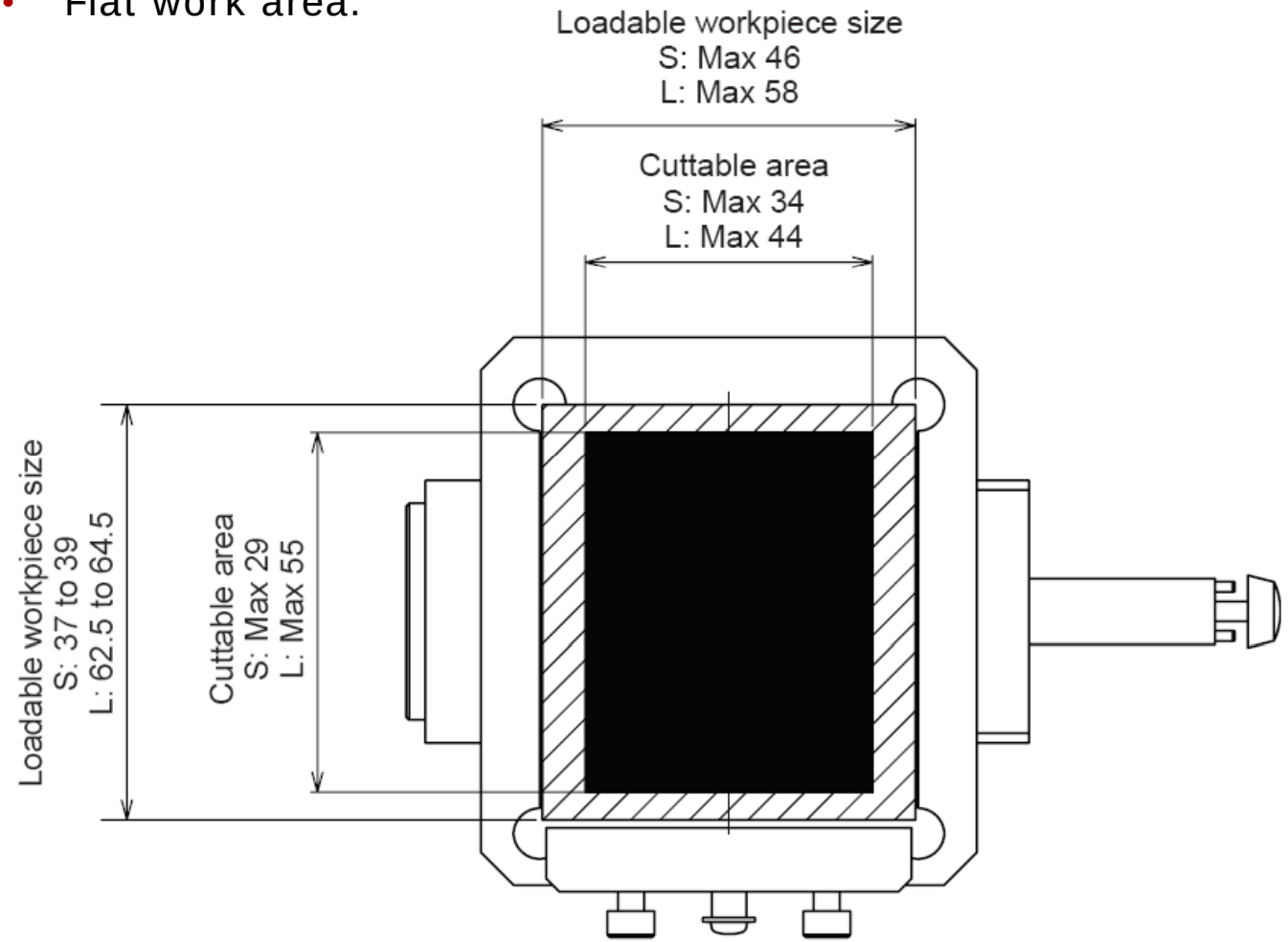
  - Rotary cutting using "**frame tip**"



NOTES:

Setup Square Clamp

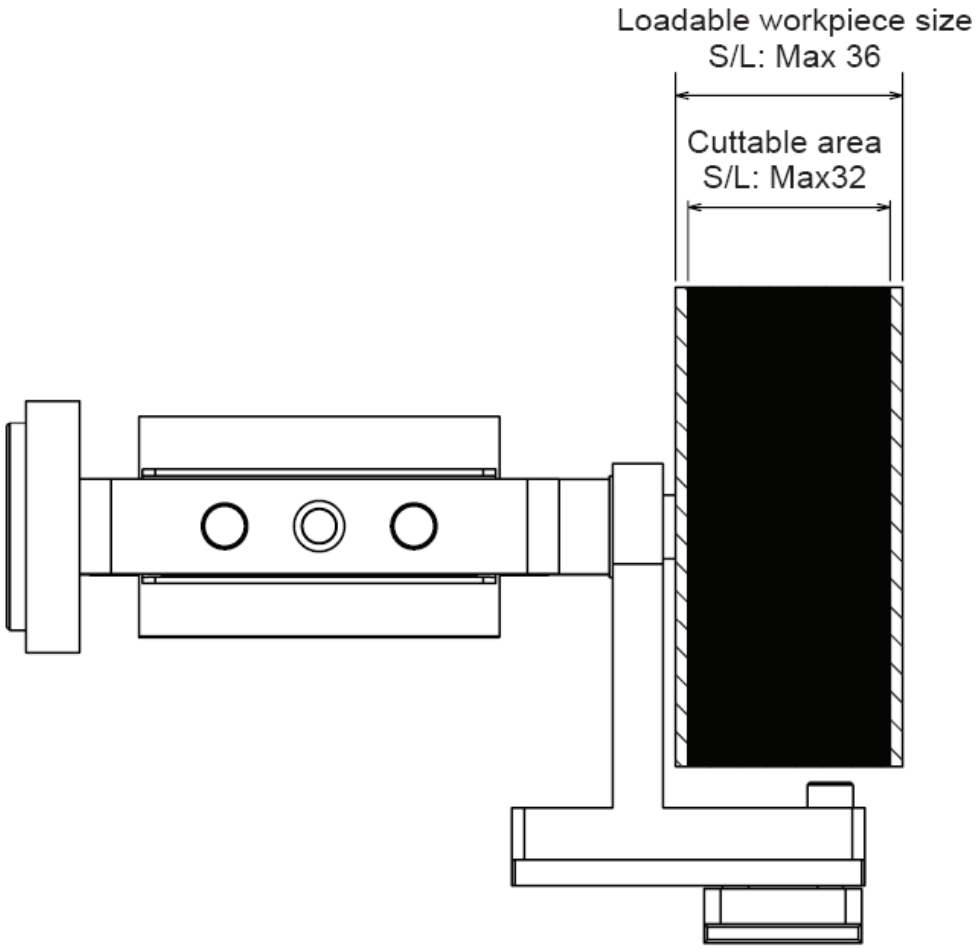
- Size Limitations for Small and Large Clamps
  - Flat work area.



NOTES:

Setup Square Clamp

- Size Limitations for Small and Large Clamps
  - Rotary work area.

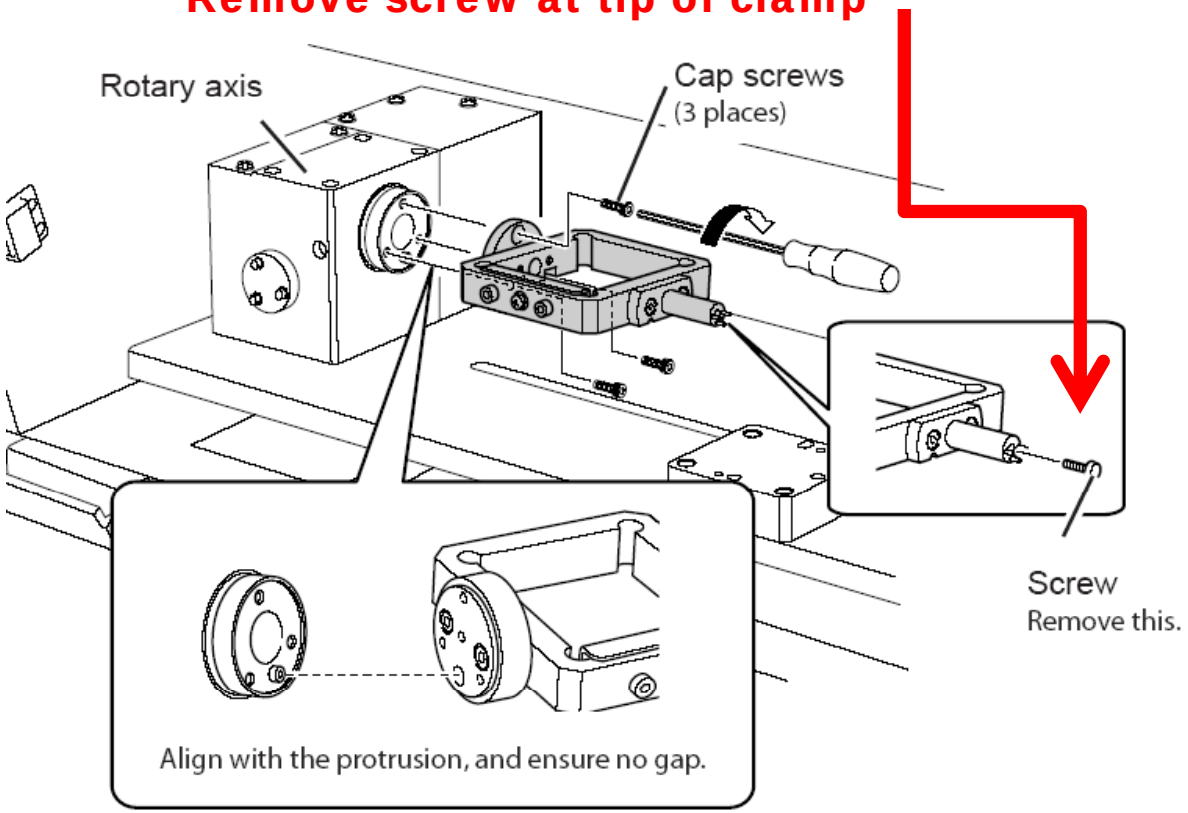


NOTES:

Setup Square Clamp

- Installing and Setting Up Clamps
  - Close front covers and press View button.
  - Open front cover and install detection pin.
  - Mount desired square clamp on Rotary Axis.

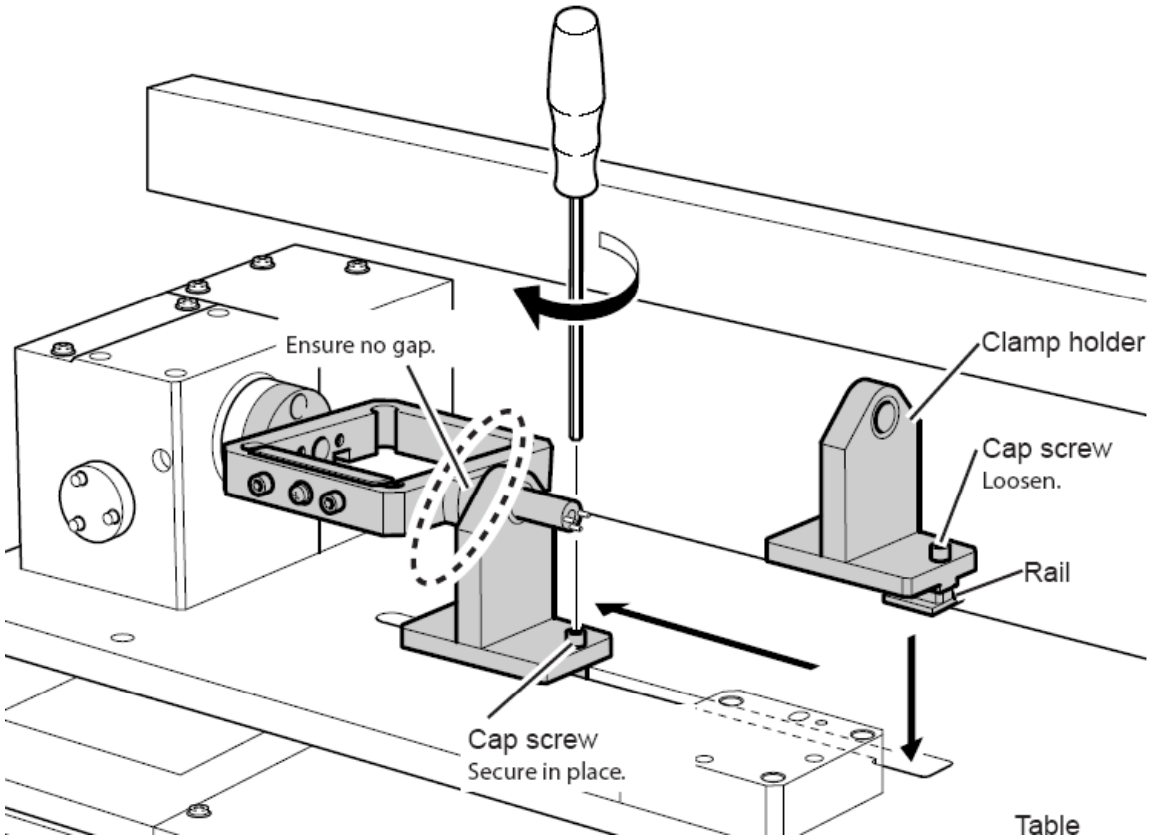
****Remove screw at tip of clamp****



NOTES:

Setup Square Clamp

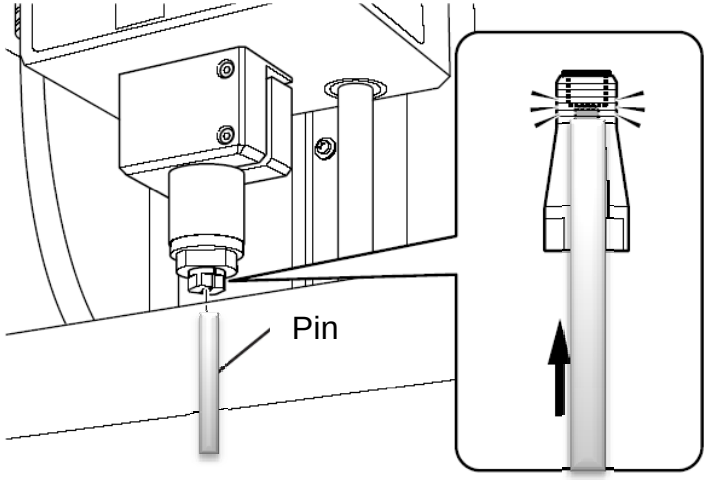
- Install clamp holder and secure square clamp.



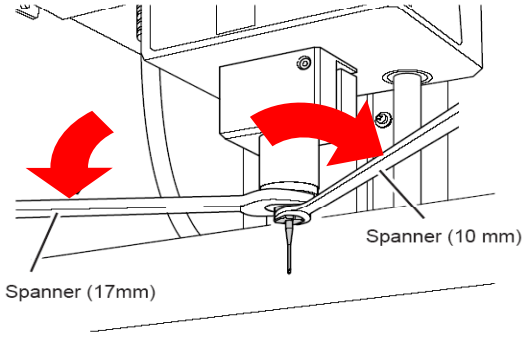
NOTES:

Install Detection Pin

- Insert detection pin until it stops. There is a magnet inside the collet that will “hold” the pin. Approximately 30 mm should be extended out from the collet.



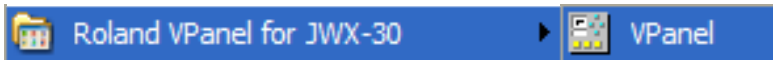
- Use both spanners to tighten the collet.

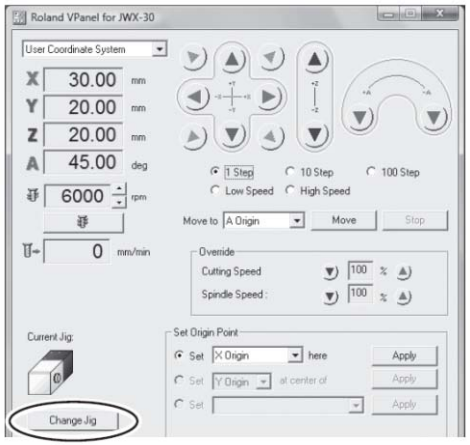


NOTES:

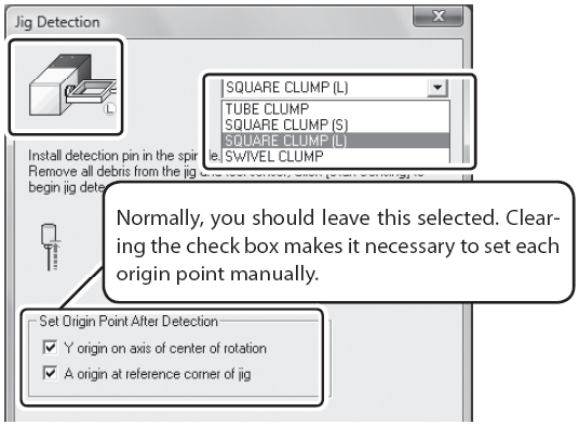
Setup Square Clamp

- Close covers and open Vpanel for JWX-30.
  - Located under programs & “Roland Vpanel for JWX-30”.
- Click on “Change Jig”.





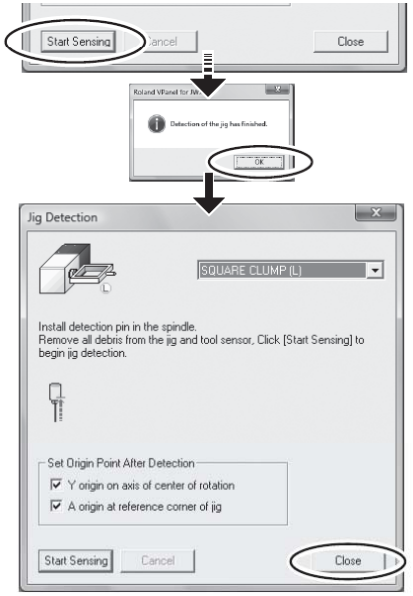
- Select Square Clamp (Large) or Square Clamp (Small).



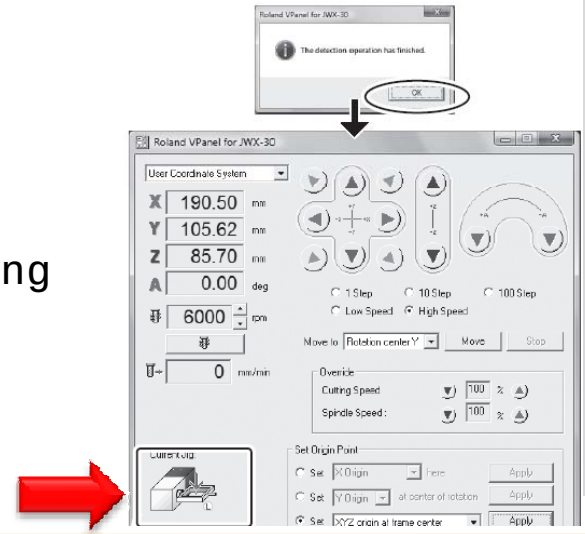
NOTES:

Setup Square Clamp

- Click on “Start Sensing” to begin the detection process.
- JWX-30 will automatically detect various points as well as turn the spindle by half a turn if needed. Click “Close” when the process has finished.



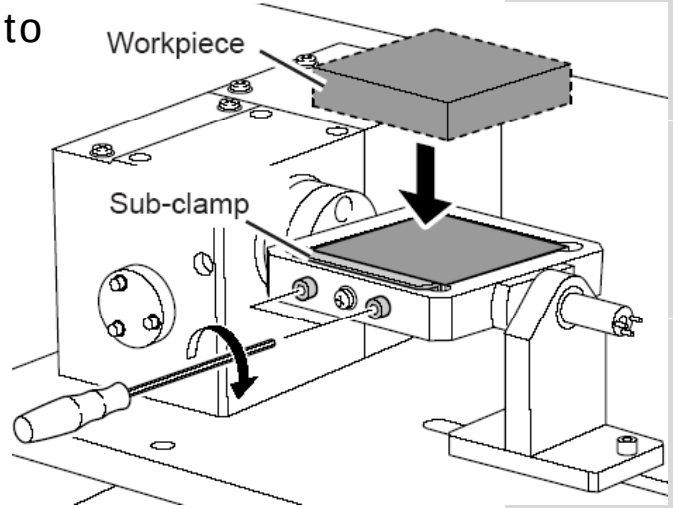
- Once finished, the jig will indicate which jig is being used.
- JWX-30 is now ready setup for using the small square fixture.



NOTES:

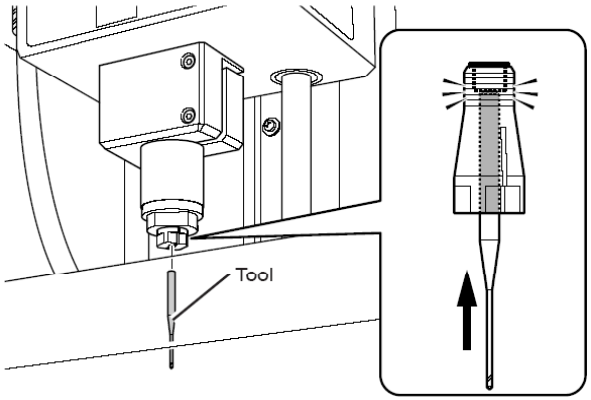
Setup Square Clamp

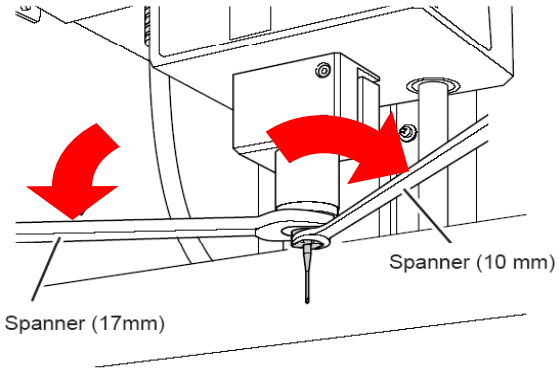
- Install material into clamp.
- Close covers and press “View” button to move the table forward and make the fixtures more accessible.



NOTES:

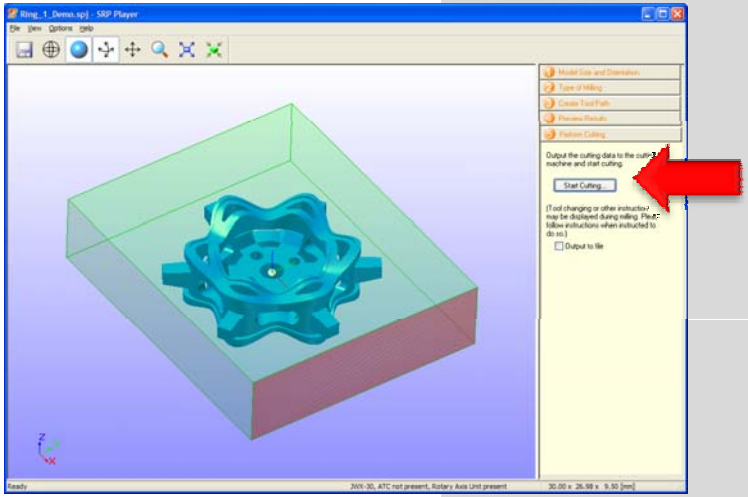
- Install 1mm ball end mill.





Setup Square Clamp

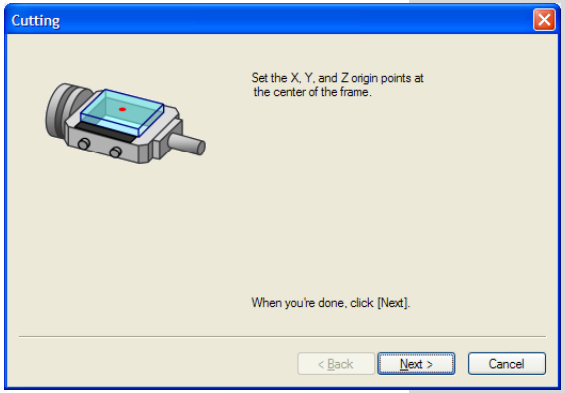
- You will be using SRP Player to “send” the program to the JWX-30.
- Use the sides or frame center program to perform this procedure.
- Click on “Start Cutting” to begin.



NOTES:

- The software will indicate where you need to set the origin point.

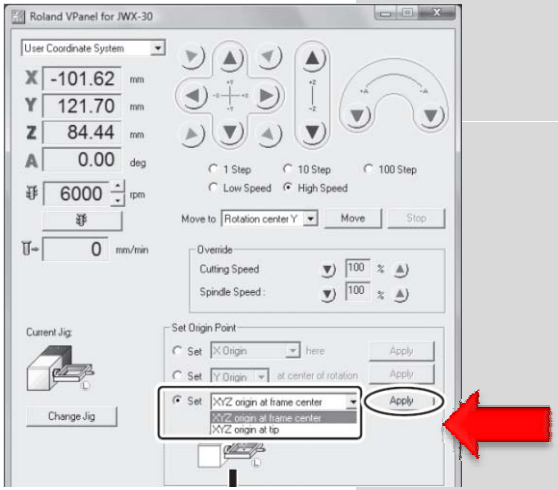
  DO NOT CLICK “NEXT” YET



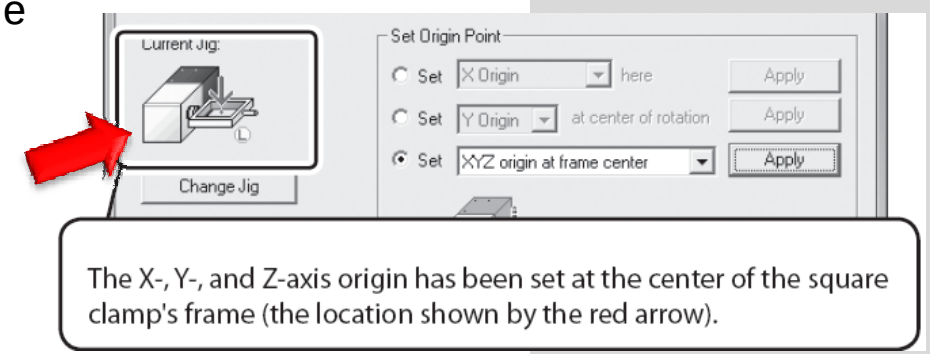
Setup Square Clamp

- Using the JWX-30 Virtual Panel, set the origin point.
- Select “Set XYZ origin at frame center” and click “Apply”.
- The tool will check the tool height and set the correct X & Y origins at the correct location.

NOTES:



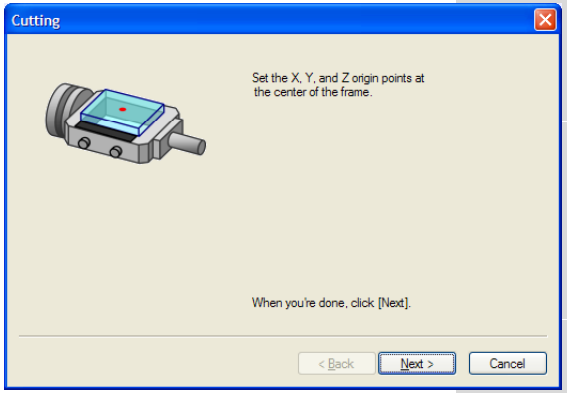
- Once finished, the Vpanel will indicate where the origin is set using a red arrow on the fixture.



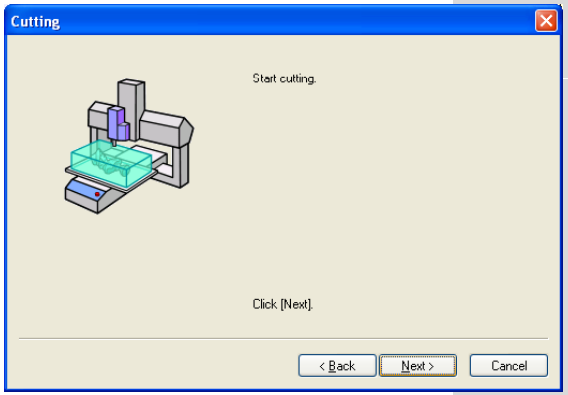
The X-, Y-, and Z-axis origin has been set at the center of the square clamp's frame (the location shown by the red arrow).

Setup Square Clamp

- Now that the origins have been set, click on “Next”.



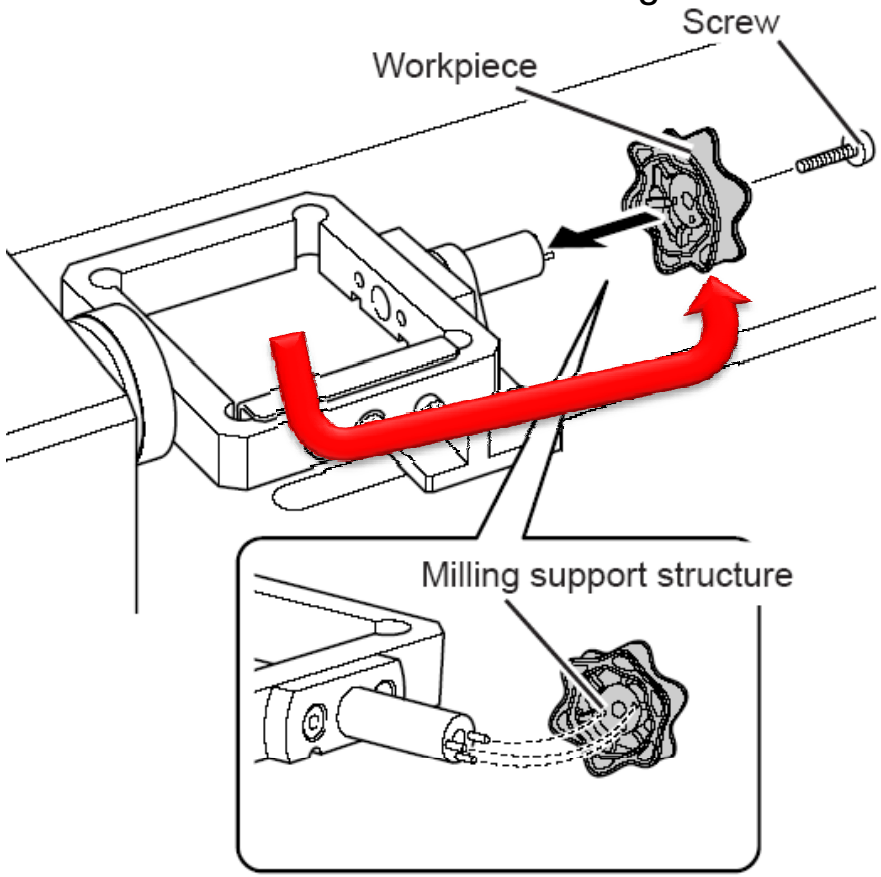
- Click “Next” again to start the cutting process.



NOTES:

Setup Square Clamp

- Once finished, cut out ring from frame and install ring on frame clamp.
  - Ensure the holes match up to the posts.
  - Use thumb screw to secure ring.

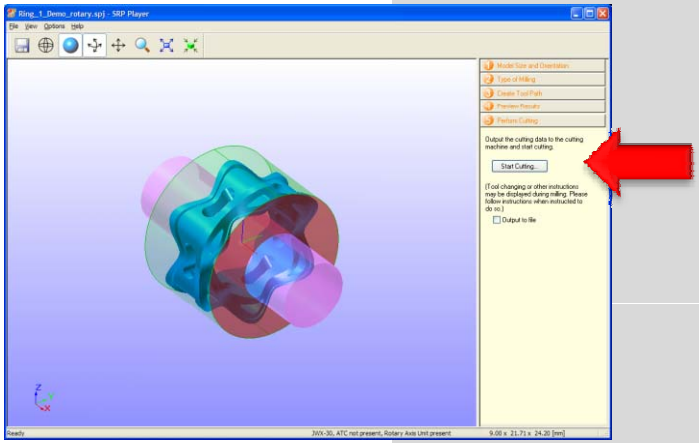


NOTES:

Setup Square Clamp

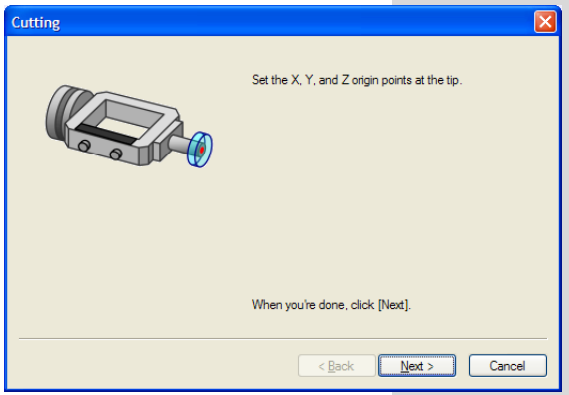
- You will be using SRP Player to “send” the program to the JWX-30.
- Open the rotary program to complete the ring.

NOTES:



- The software will indicate where you need to set the origin point.

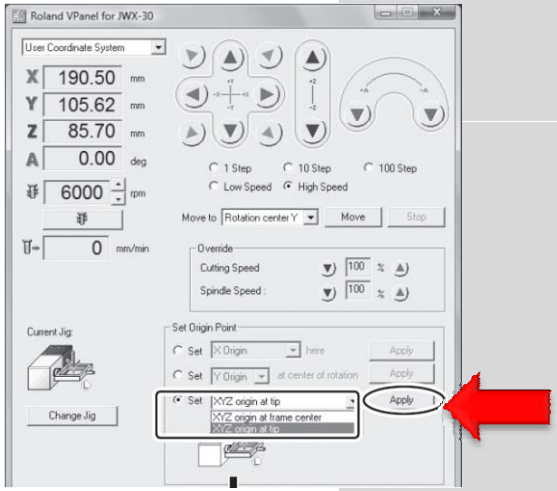
  DO NOT CLICK “NEXT” YET



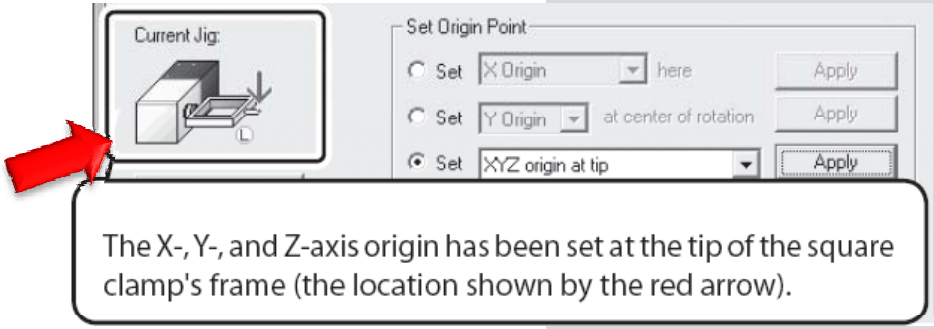
Setup Square Clamp

- Using the JWX-30 Virtual Panel, set the origin point.
- Select “Set XYZ origin at tip” and click “Apply”.
- The tool will check the tool height and set the correct X & Y origins at the correct location.

NOTES:

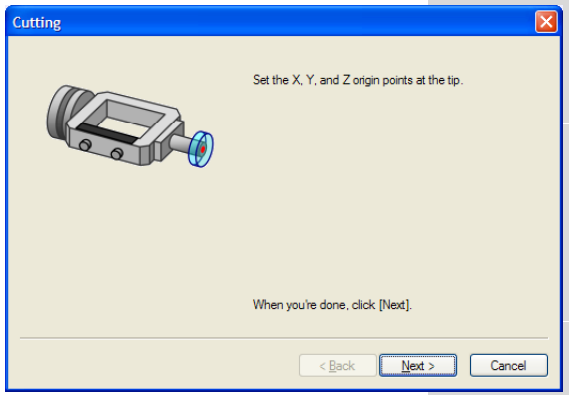


- Once finished, the Vpanel will indicate where the origin is set using a red arrow on the fixture.

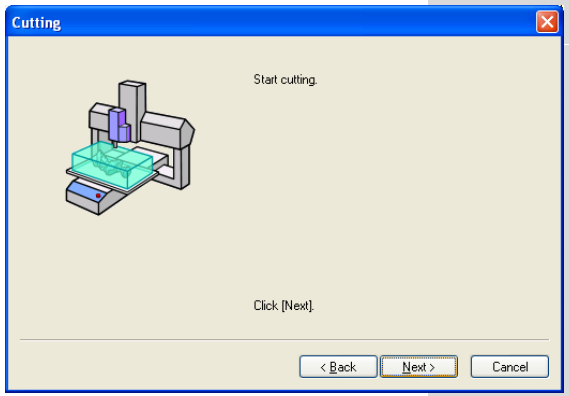


Setup Square Clamp

- Now that the origins have been set, click on “Next”.



- Click “Next” again to start the cutting process.



NOTES:

Square Clamp

- Once completed, remove the model from the square clamp.

NOTES:

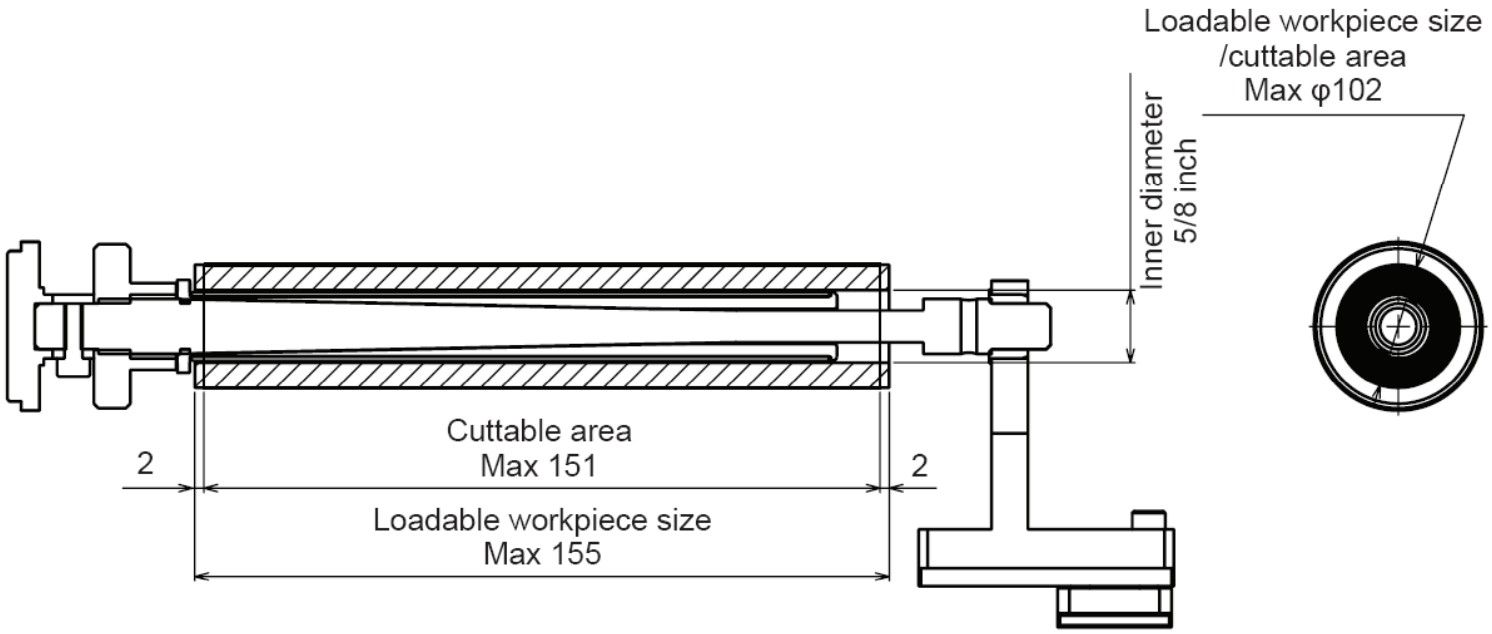
Setup Tube Clamp

- What the tube clamp will be used for
  - Rotary cutting using standard tube wax.
  - Can mill multiple rings at once or one ring at a time.

NOTES:

Setup Tube Clamp

- Size Limitations for Tube Clamp

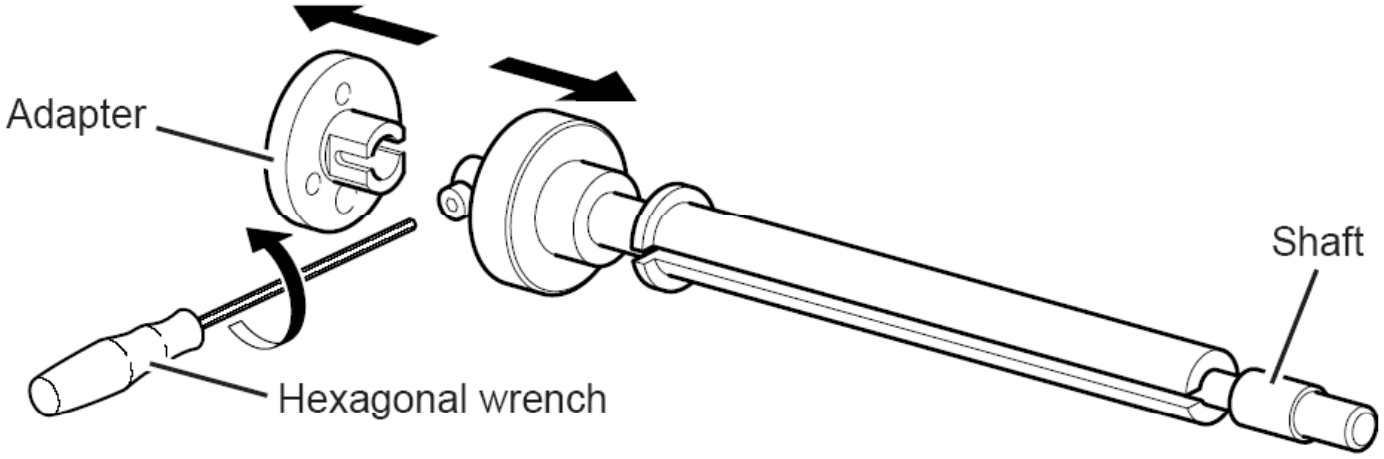


Unit: mm

NOTES:

Setup Tube Clamp

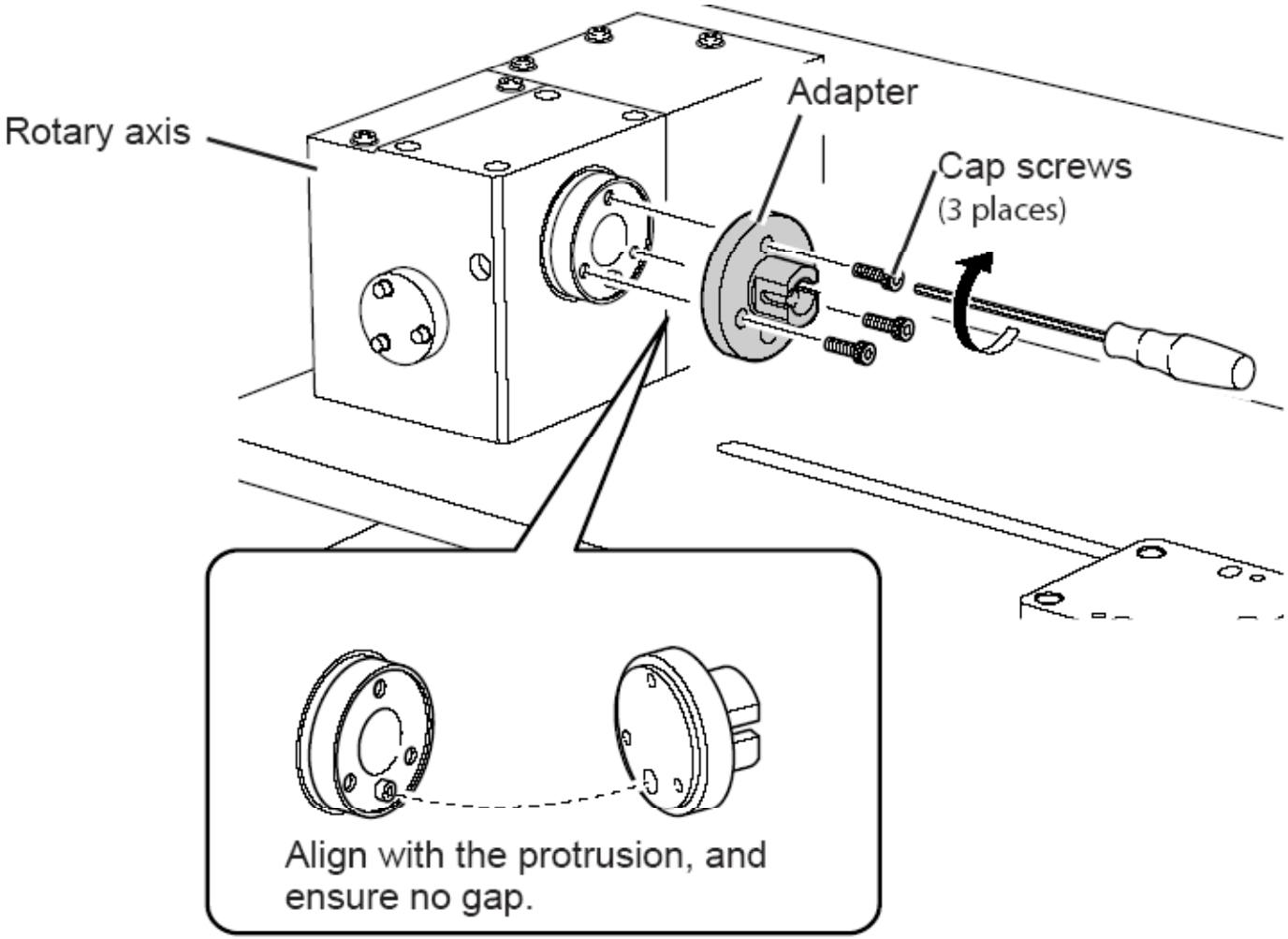
- Installing and Setting Up Clamp
  - Close front covers and press View button.
  - Open front cover and install detection pin.
  - Before installing, separate adapter and tube shaft.



NOTES:

Setup Tube Clamp

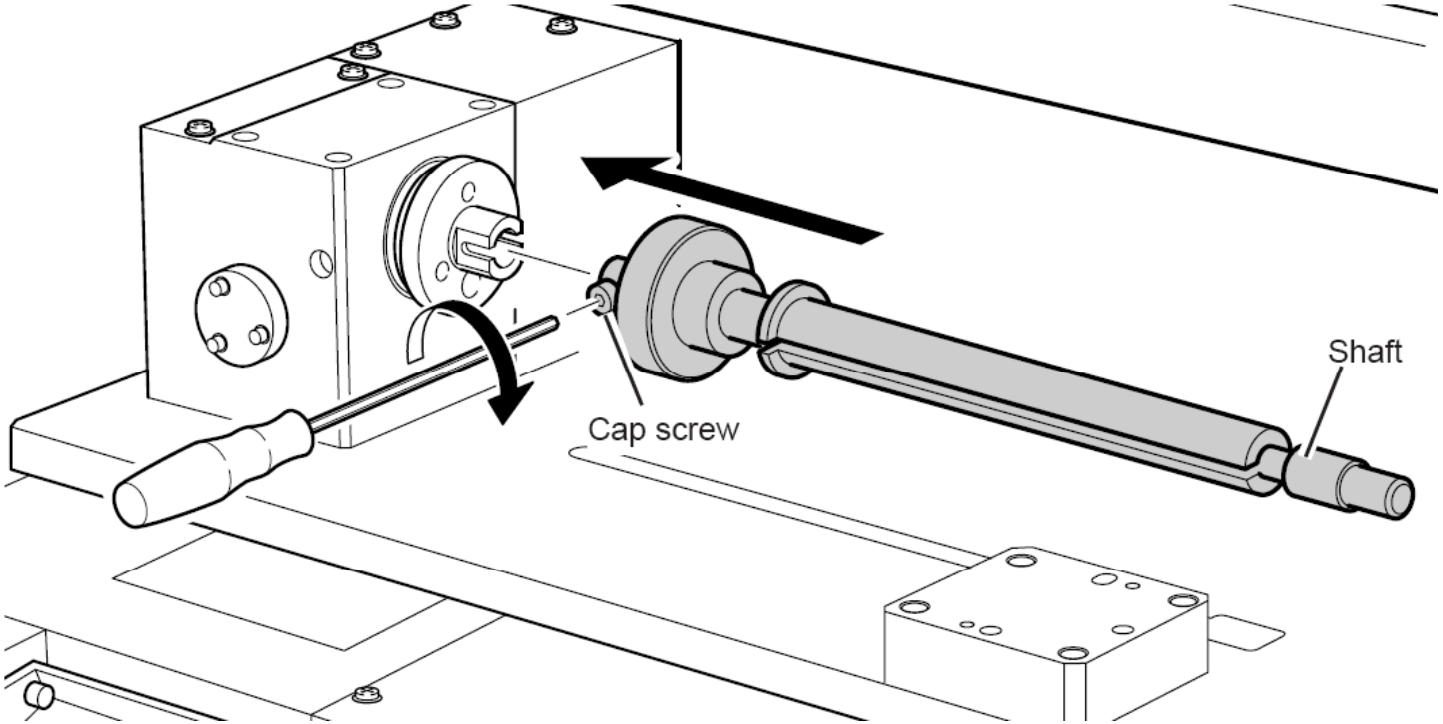
- Install adapter onto rotary axis unit.



NOTES:

Setup Tube Clamp

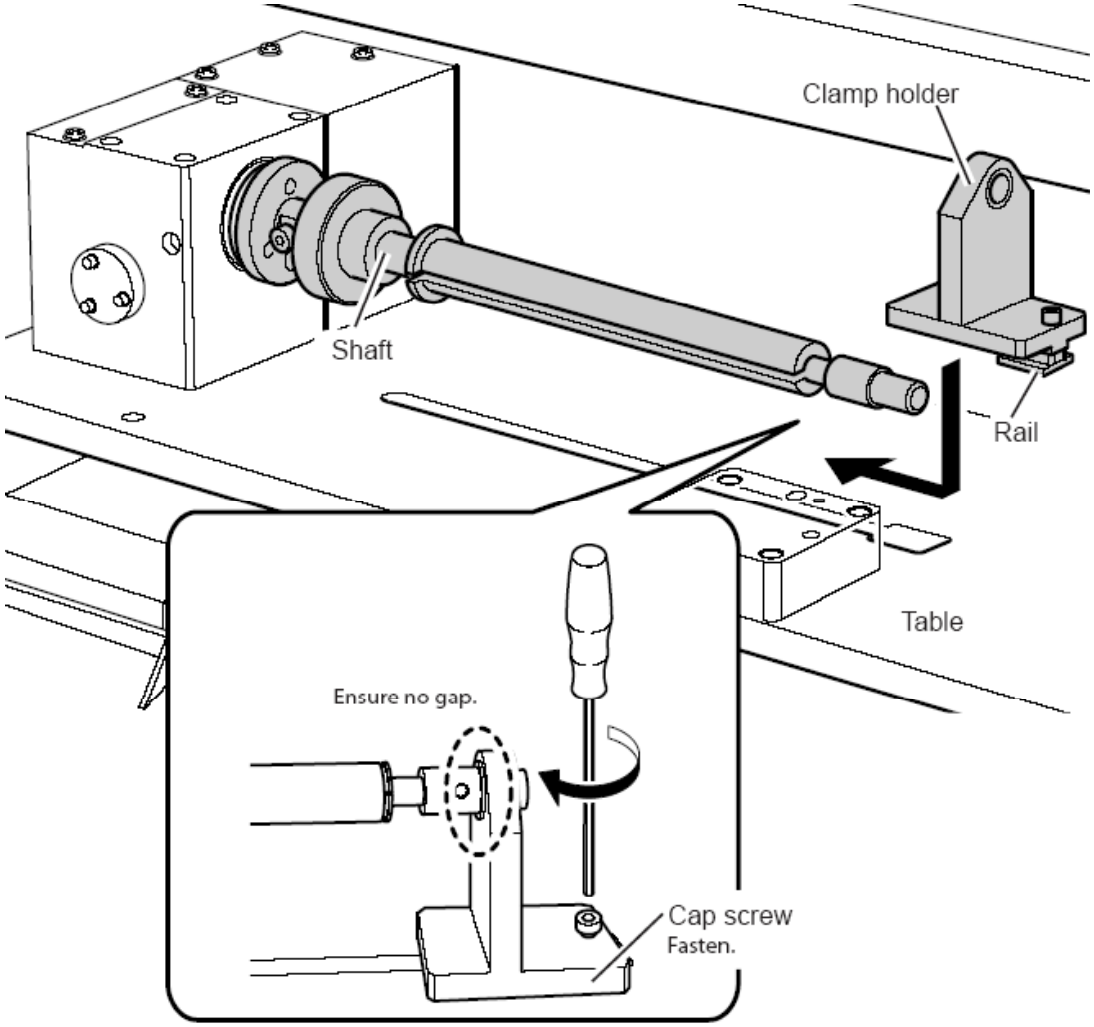
- Install shaft onto adaptor and secure with cap screw.



NOTES:

Setup Tube Clamp

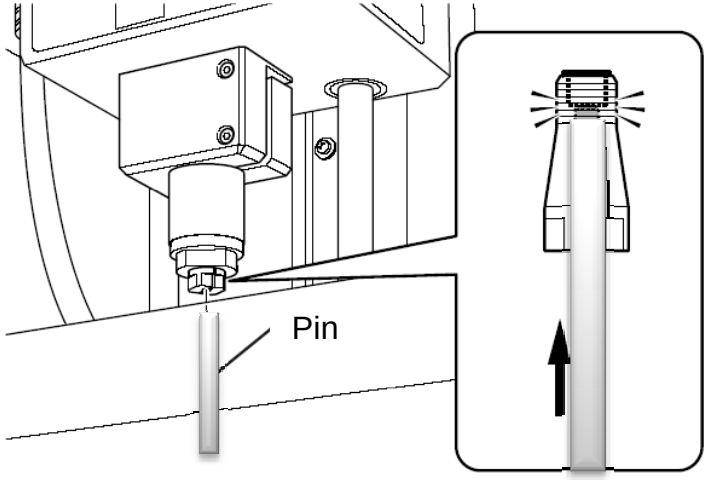
- Install clamp holder to secure tube clamp.



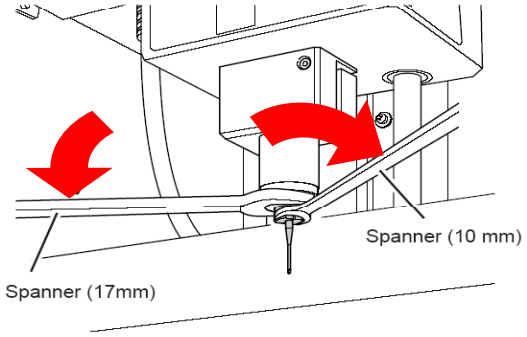
NOTES:

Install Detection Pin

- Insert detection pin until it stops. There is a magnet inside the collet that will “hold” the pin. Approximately 30 mm should be extended out from the collet.



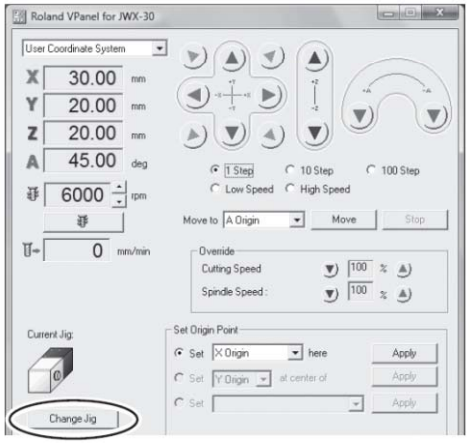
- Use both spanners to tighten the collet.



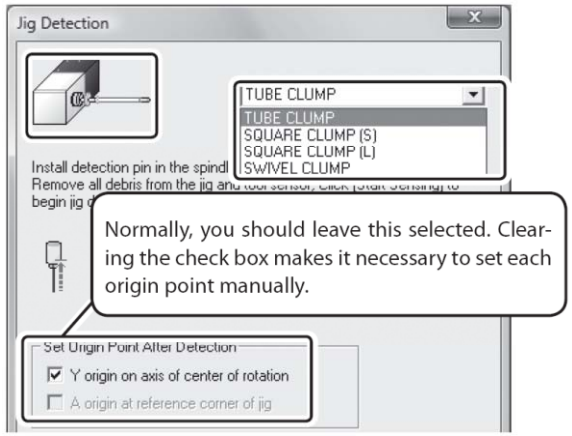
NOTES:

Setup Tube Clamp

- Close covers and open Vpanel for JWX-30.
- Click on “Change Jig”.



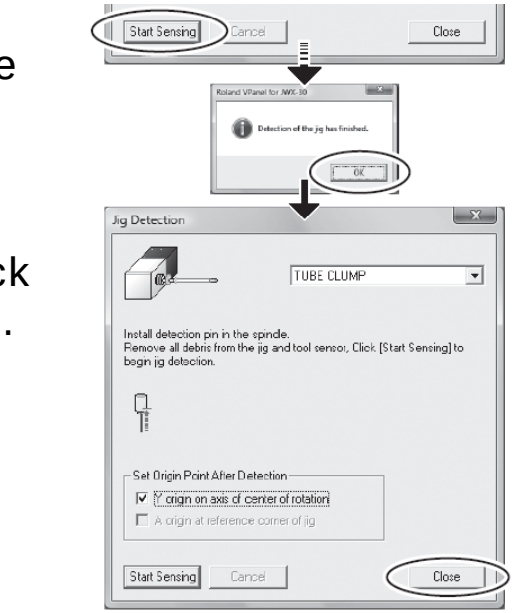
- Select “Tube Clamp” from list.



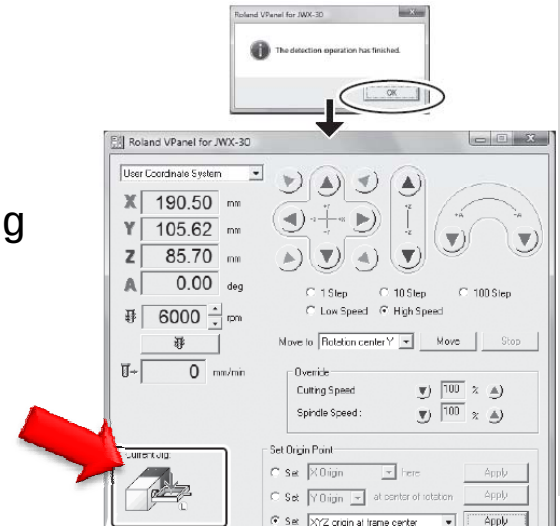
NOTES:

Setup Tube Clamp

- Click on “Start Sensing” to begin the detection process.
- JWX-30 will automatically detect various points as well as turn the spindle by half a turn if needed. Click close when the process has finished.



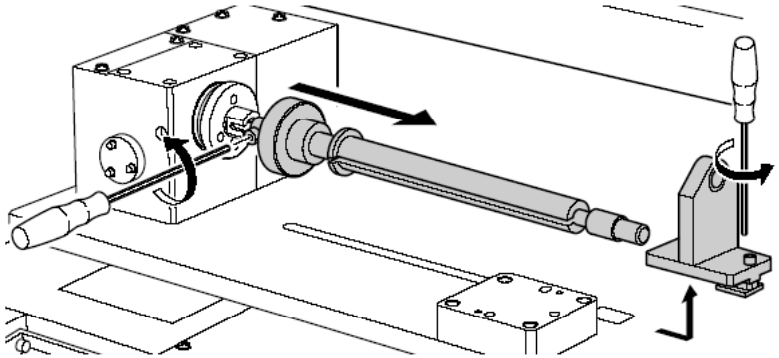
- Once finished, the jig will indicate which jig is being used.
- JWX-30 is now ready setup for using the swivel clamp fixture.



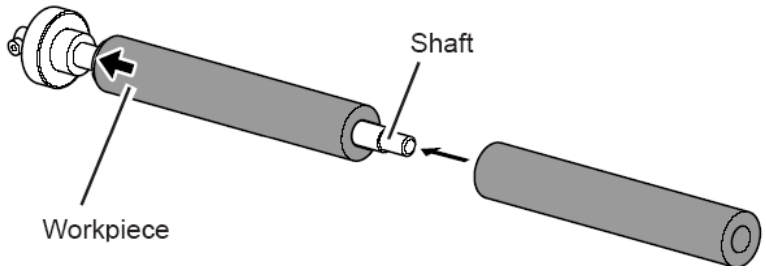
NOTES:

Setup Tube Clamp

- Installing material into tube clamp.
  - Close covers and press “View” button to move the table forward and make the fixtures more accessible.
  - Remove clamp holder.



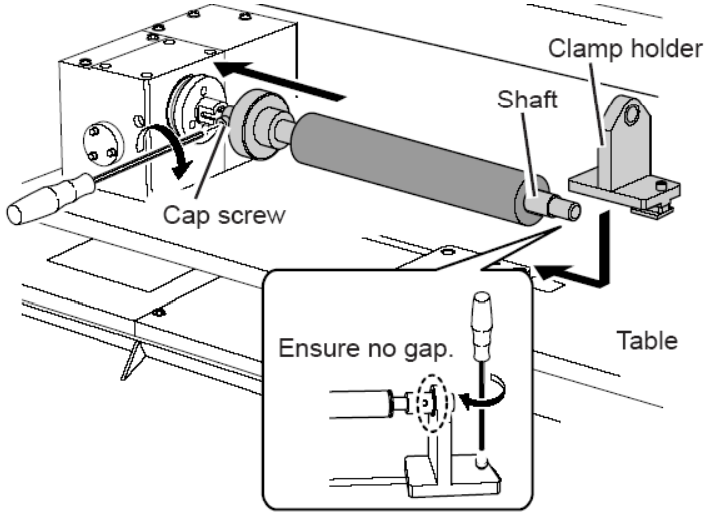
  - Mount workpiece onto shaft. Press firmly enough to keep the material from moving during cutting.



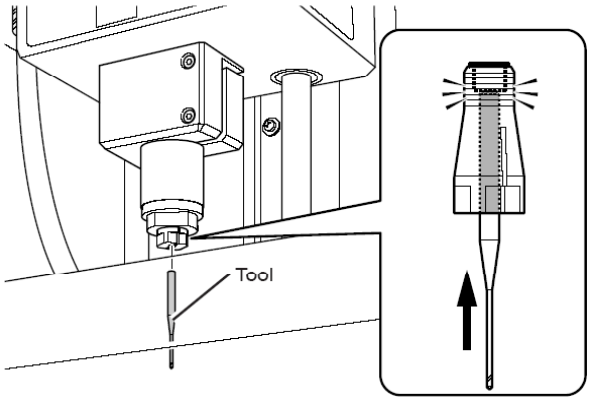
NOTES:

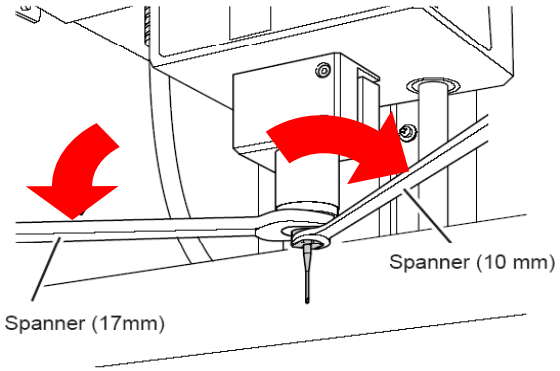
Setup Tube Clamp

- Remount clamp holder to secure tube clamp.



- Install 1mm ball end mill

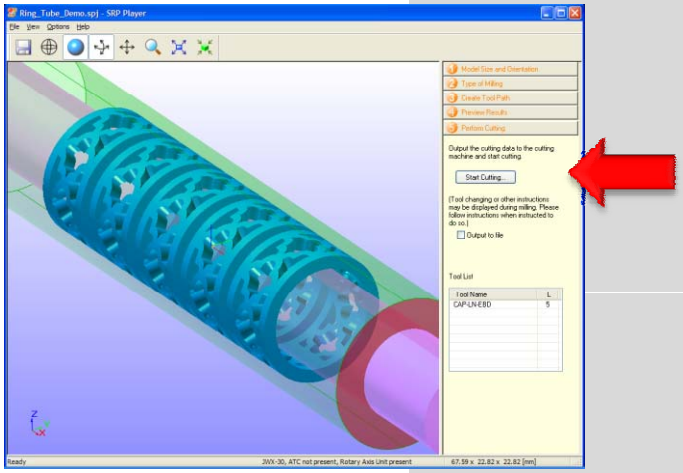




NOTES:

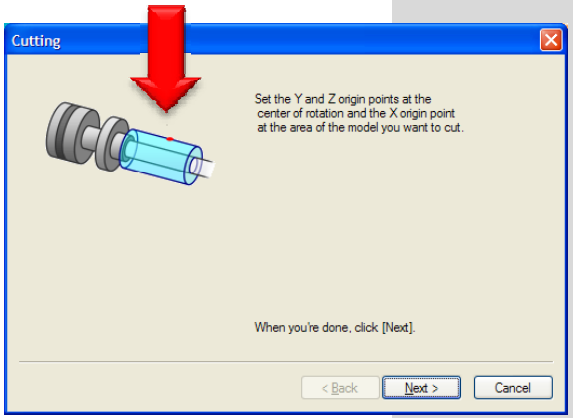
Setup Tube Clamp

- You will be using SRP Player to “send” the program to the JWX-30.
- Click on Start Cutting to begin.



- The software will indicate where you need to set the X origin point.

*****DO NOT CLICK “NEXT” YET*****



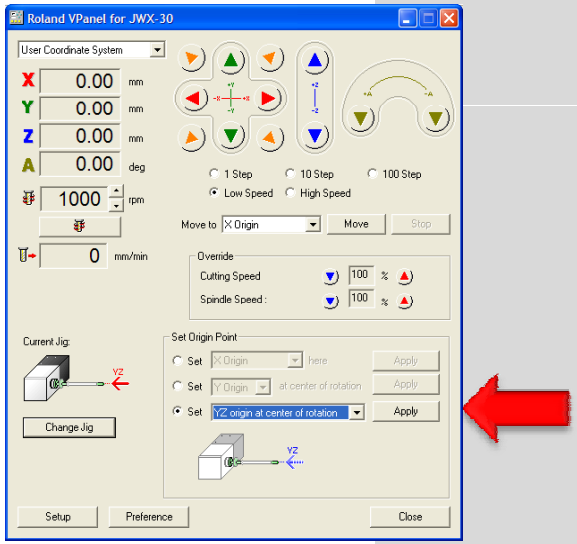
NOTES:

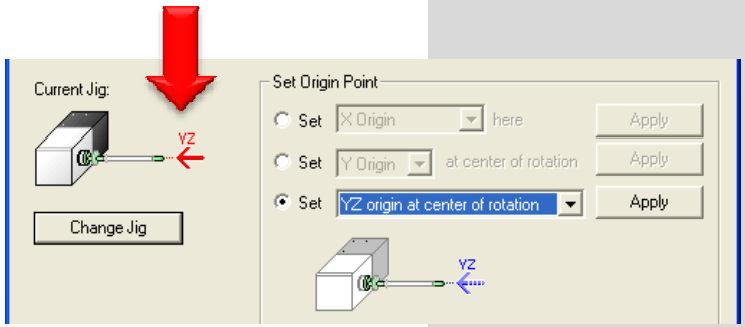
Setup Tube Clamp

- Using the JWX-30 Virtual Panel, set the origin point.
- Select “Set YZ origin at center of rotation” and click “Apply”.
- The tool will check the tool height and set the correct Y origin at the correct location.

- Once finished, the Vpanel will indicate where the origin is set using a red arrow on the fixture.

NOTES:

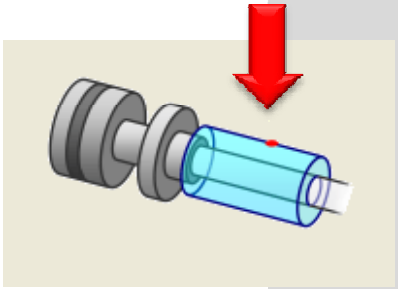




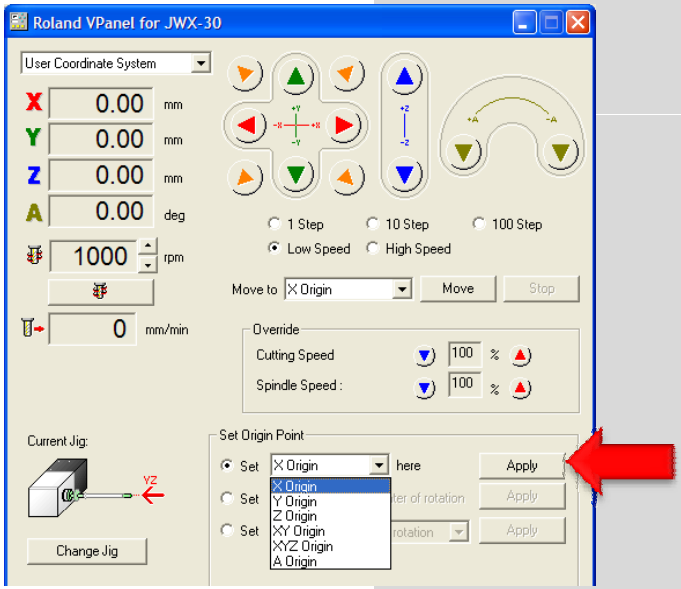
Setup Tube Clamp

- Now we need to set the X Origin point.
- Move the tool as indicated by your software.
- In this example, we move the tool in the X axis until it is in the middle of our wax piece.

NOTES:

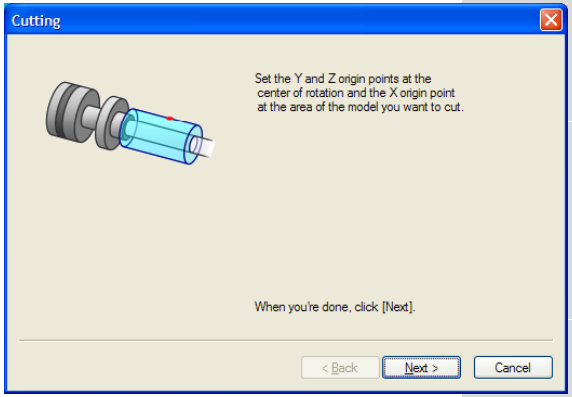


- We now set the X Origin at this location by selecting “Set X origin here” and clicking “Apply”.

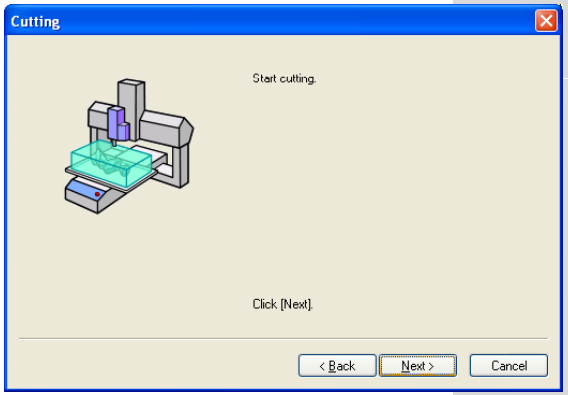


Setup Tube Clamp

- Now that the origins have been set, click on “Next”.



- Click “Next” again to start the cutting process.



NOTES:

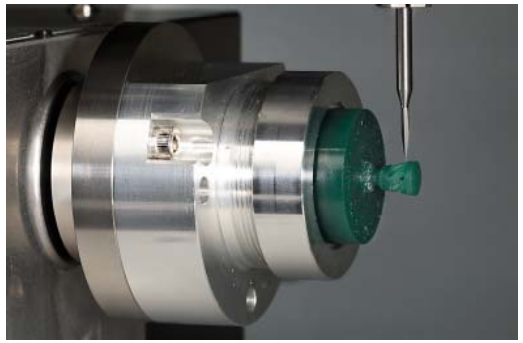
Tube Clamp

- Once cutting has been completed, remove wax piece from fixture.

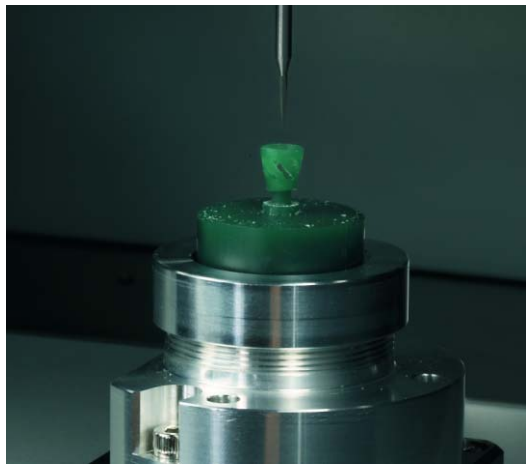
NOTES:

Setup Swivel Clamp

- What the swivel clamp will be used for
  - The swivel clamp will be used for cutting heads or bezels.
    - Rotary cutting



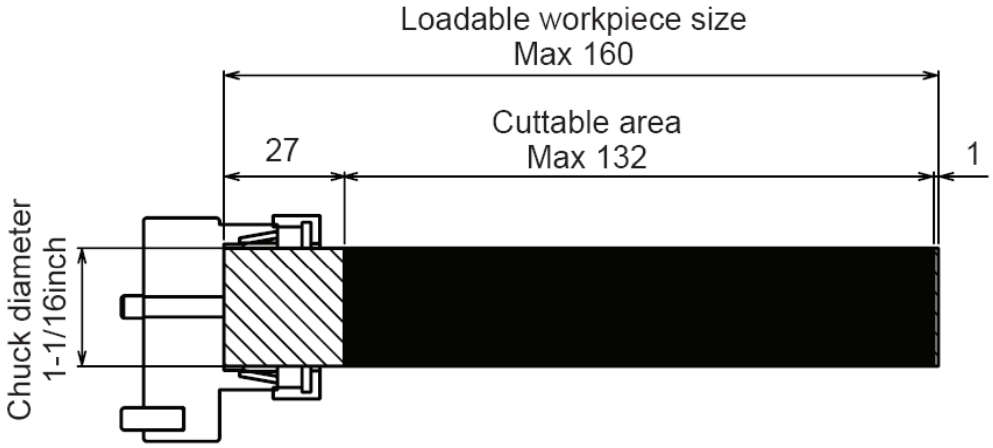
    - Table cutting

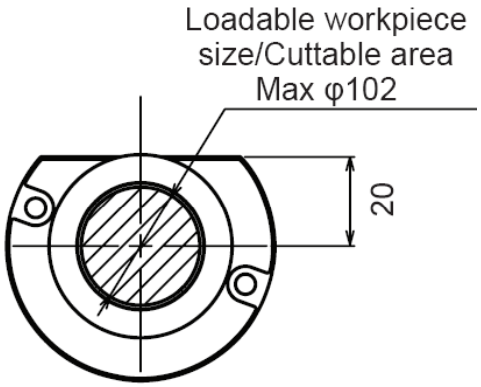


NOTES:

Setup Swivel Clamp

- Size Limitations for Swivel Clamp on Rotary Axis



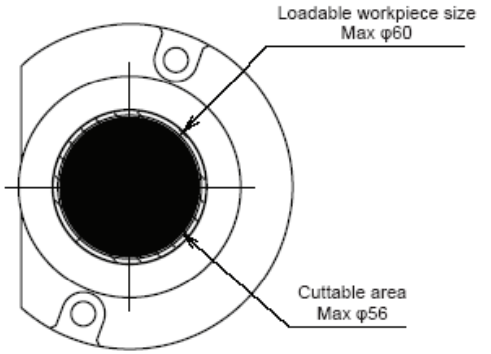


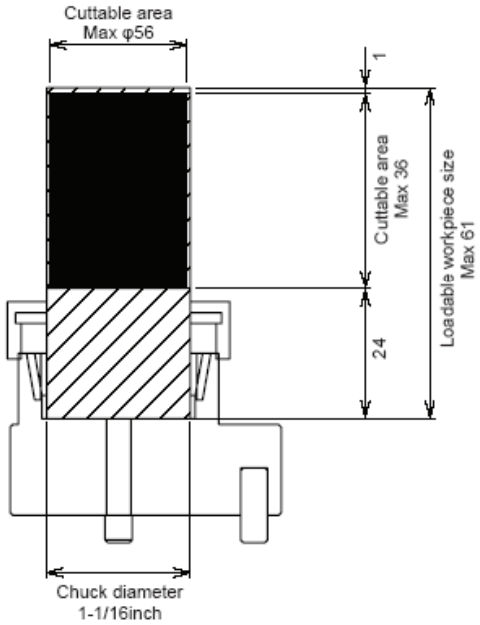
Unit: mm

NOTES:

Setup Swivel Clamp

- Size Limitations for Swivel Clamp on Table





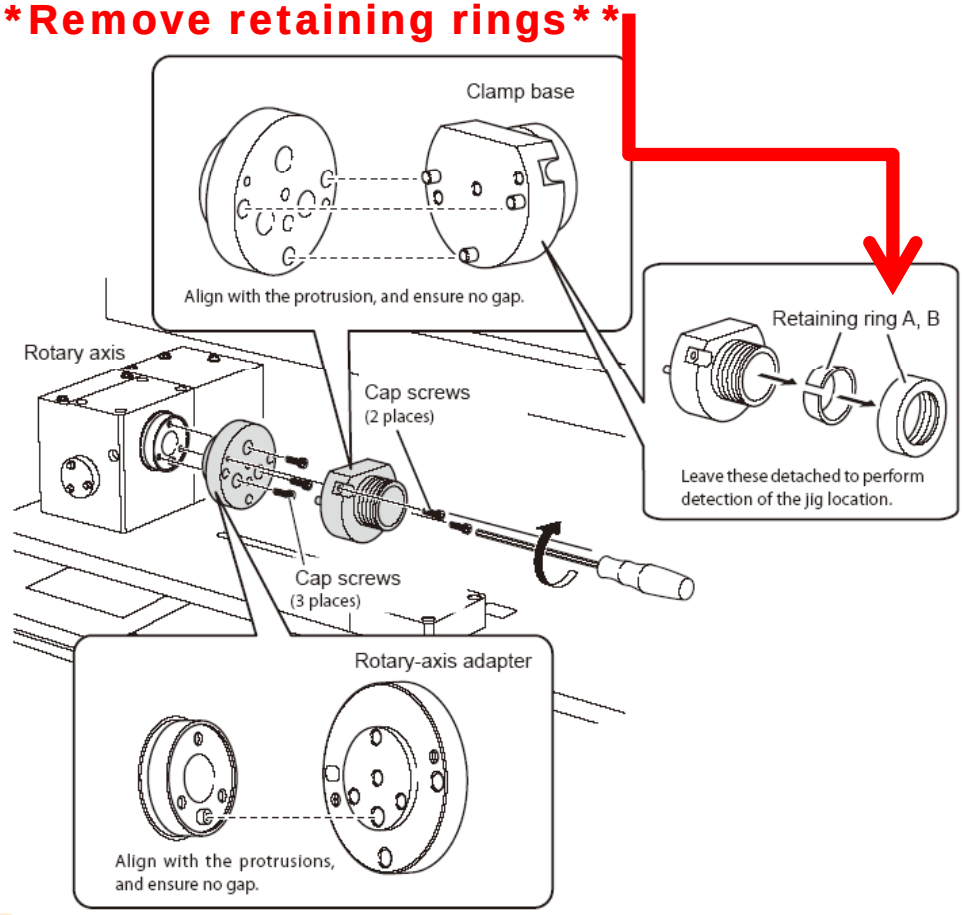
Unit: mm

NOTES:

Setup Swivel Clamp

- Installing and Setting Up Clamp
  - Close front covers and press View button.
  - Open front cover and install detection pin.
  - Mount Rotary Axis adaptor and clamp base on Rotary Axis.

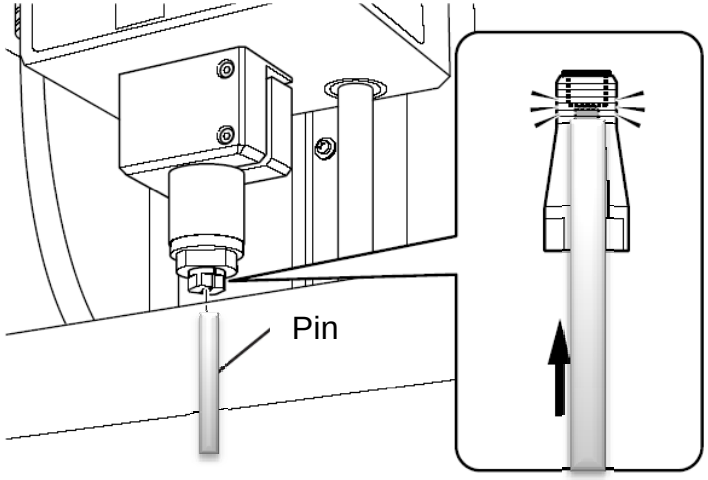
****Remove retaining rings****



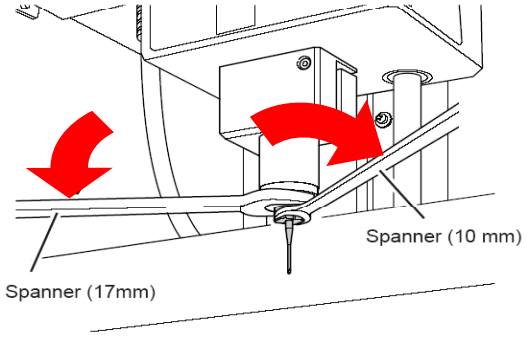
NOTES:

Install Detection Pin

- Insert detection pin until it stops. There is a magnet inside the collet that will “hold” the pin. Approximately 30 mm should be extended out from the collet.



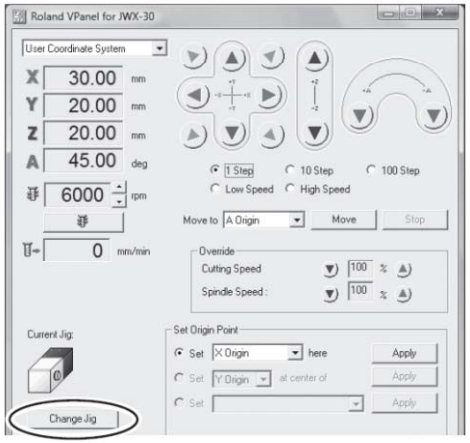
- Use both spanners to tighten the collet.



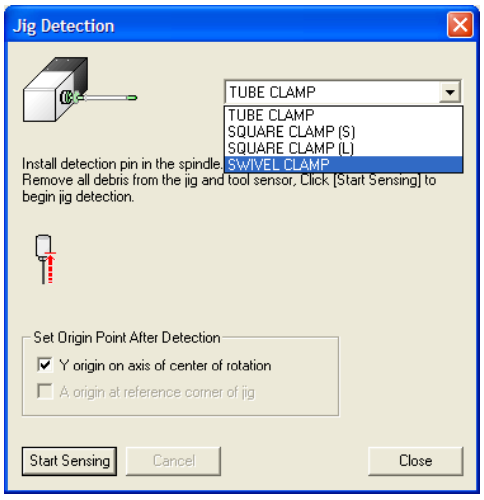
NOTES:

Setup Swivel Clamp

- Close covers and open VPanel for JWX-30.
- Click on “Change Jig”.



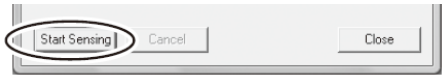
- Select “Swivel Clamp”.

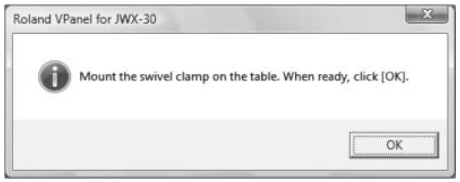


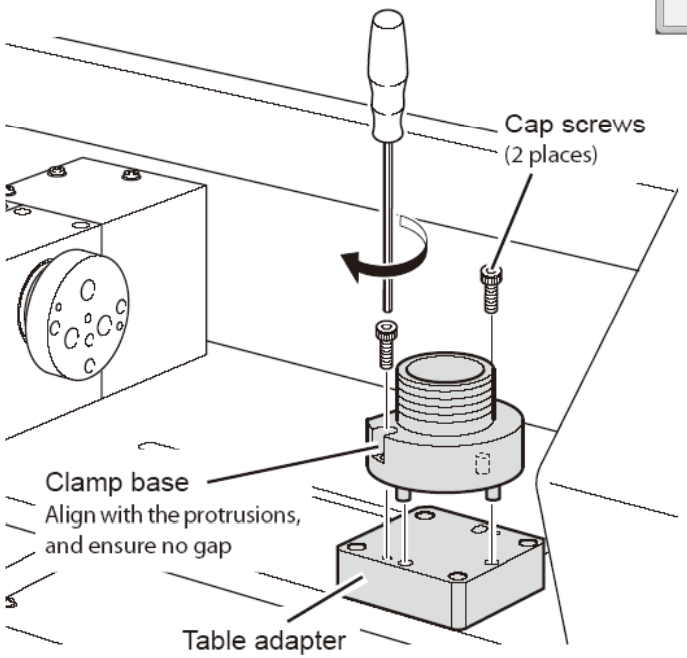
NOTES:

Setup Swivel Clamp

- Click on “Start Sensing” to begin the detection process.
- JWX-30 will automatically detect various points as well as turn the spindle by half a turn if needed.
- When instructed to do so, you will need to mount the swivel clamp onto the table adaptor.





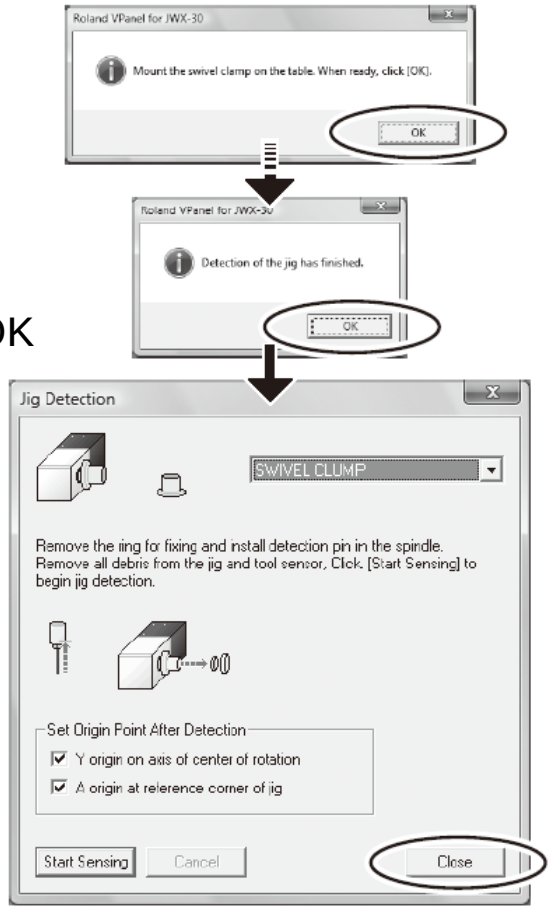


NOTES:

Setup Swivel Clamp

- Click OK to complete detection.

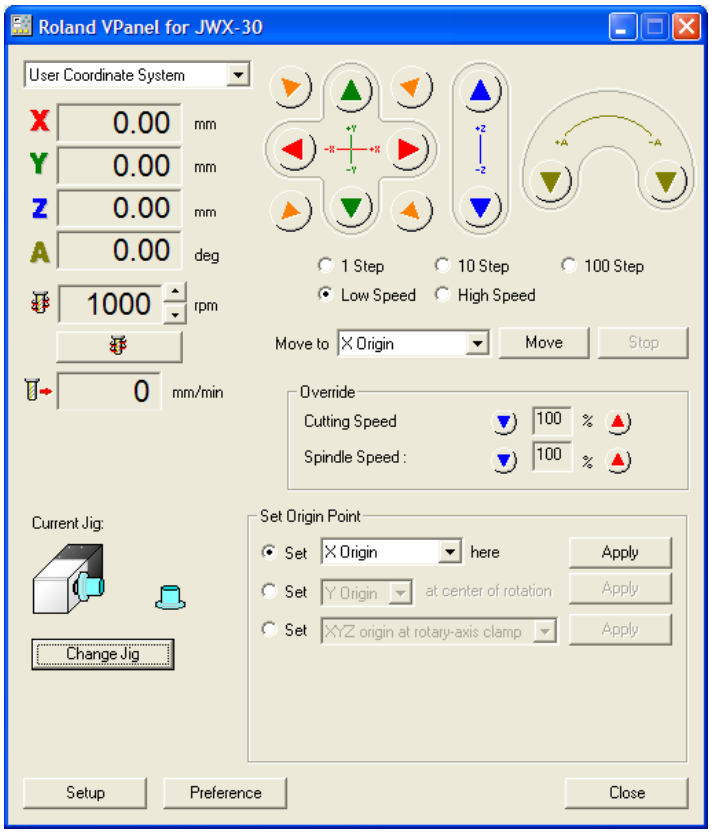
- Once detection has finished, click OK and close Jig Detection window.



NOTES:

Setup Swivel Clamp

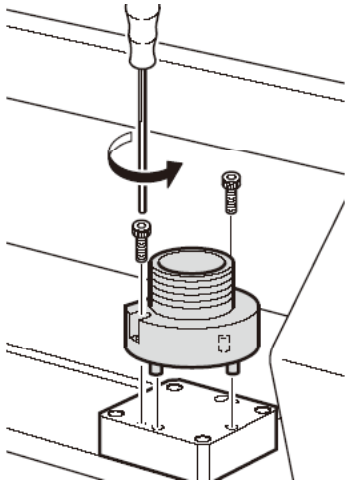
- The JWX-30 VPanel will indicate what fixture is now set up on machine.



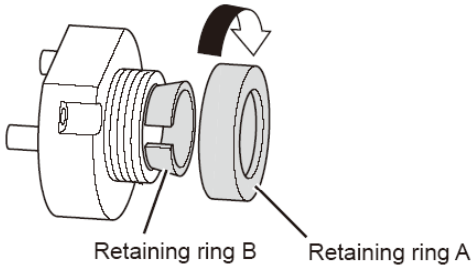
NOTES:

Setup Swivel Clamp

- Installing material into swivel clamp.
  - Close covers and press “View” button to move the table forward and make the fixtures more accessible.
  - Remove clamp base from table



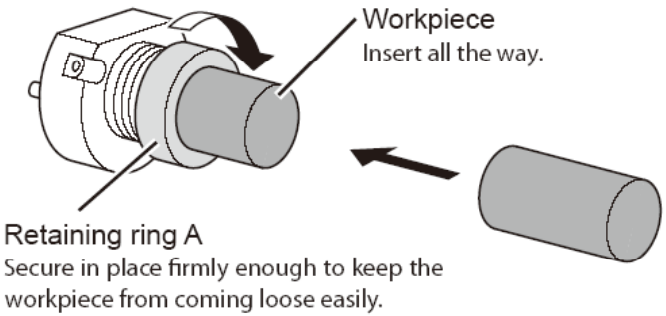
  - Attach retaining rings onto clamp base



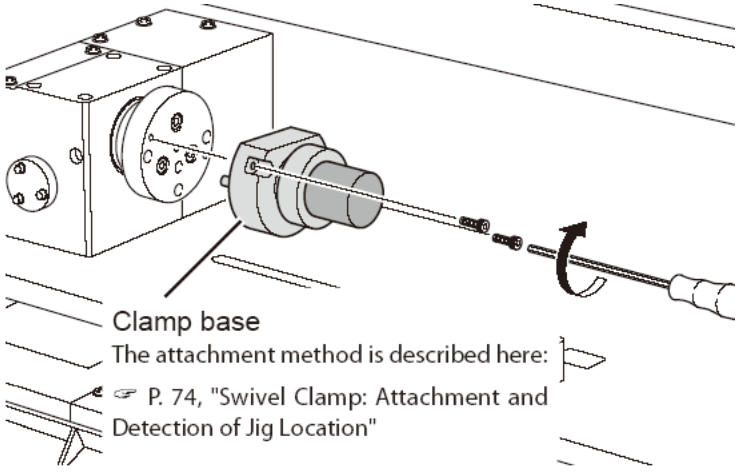
NOTES:

Setup Swivel Clamp

- Mount workpiece material securing with retaining ring



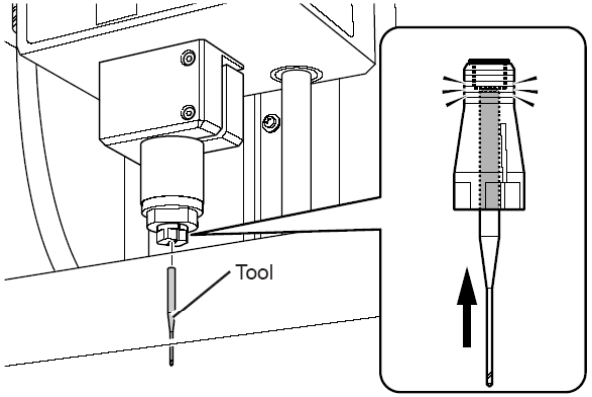
- Mount clamp base and material onto rotary axis adaptor

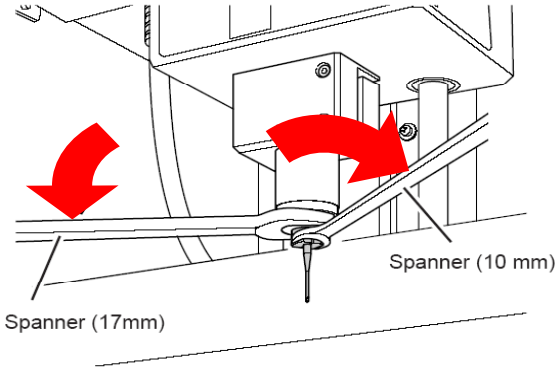


NOTES:

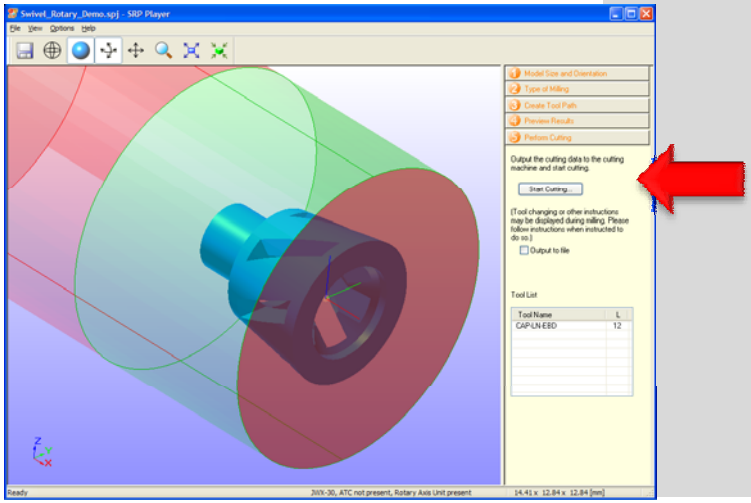
Setup Swivel Clamp

- Install 1mm ball end mill





- You will be using SRP Player to “send” the program to the JWX-30.
- Click on “Start Cutting” to begin.

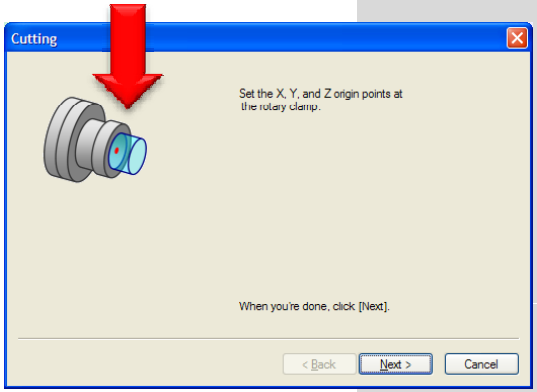


NOTES:

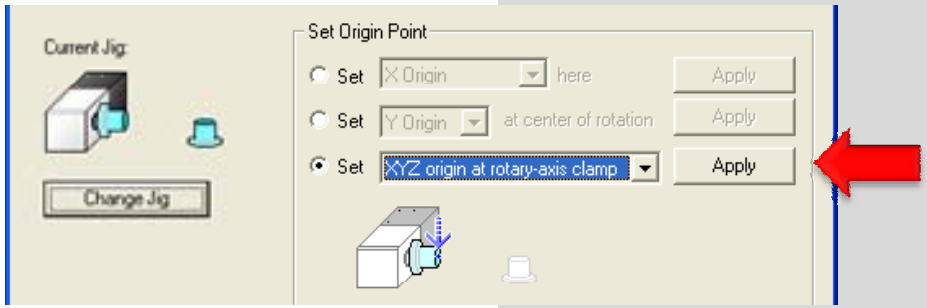
Setup Swivel Clamp

- The software will indicate where you need to set the X origin point.

  DO NOT CLICK "NEXT" YET



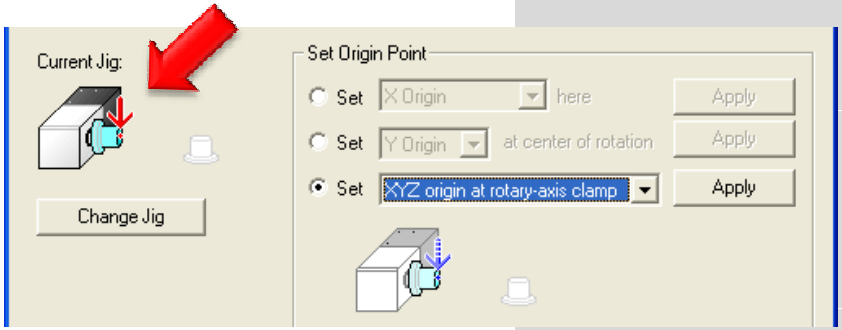
- Using the JWX-30 Virtual Panel, set the origin point.
- Select "Set XYZ origin at rotary-axis clamp" and click "Apply".
- The tool will check the tool height and set the correct X & Y origins at the correct location.



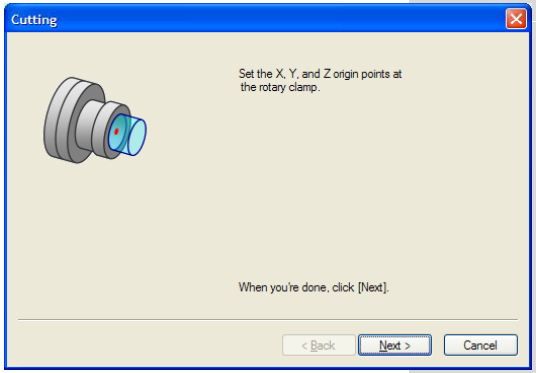
NOTES:

Setup Swivel Clamp

- Once finished, the Vpanel will indicate where the origin is set using a red arrow on the fixture.



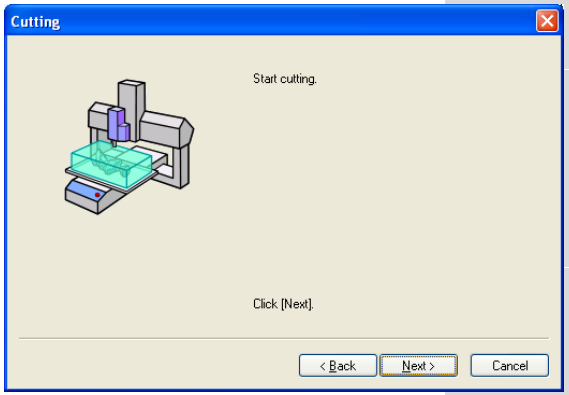
- Now that the origin points have been set, click on “Next”.



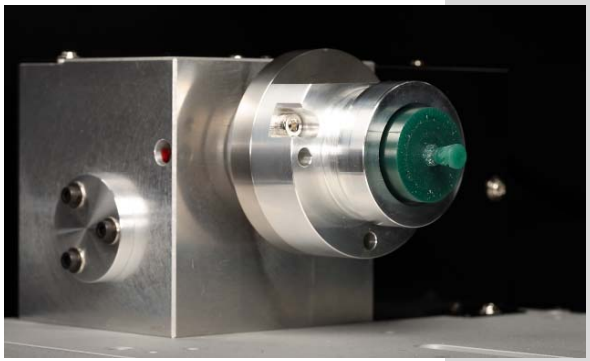
NOTES:

Setup Swivel Clamp

- Click “Next” again to start the cutting process.



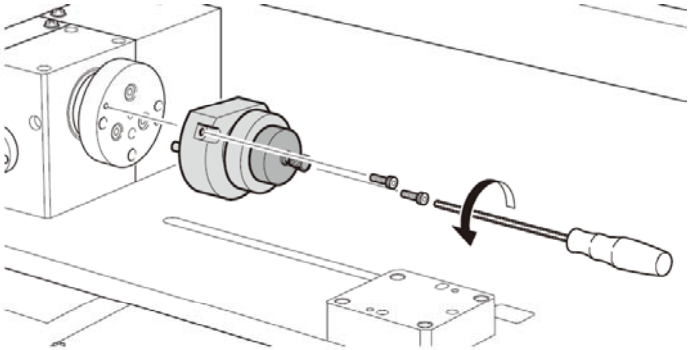
- Completed wax model.



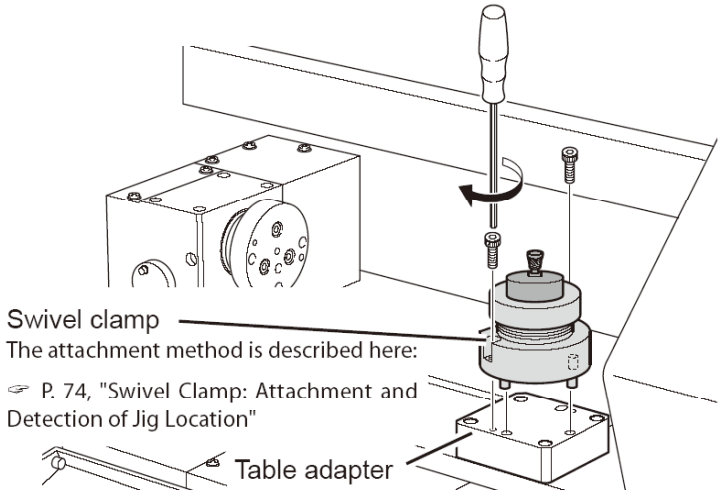
NOTES:

Setup Swivel Clamp

- Remove swivel clamp fixture from rotary axis unit.



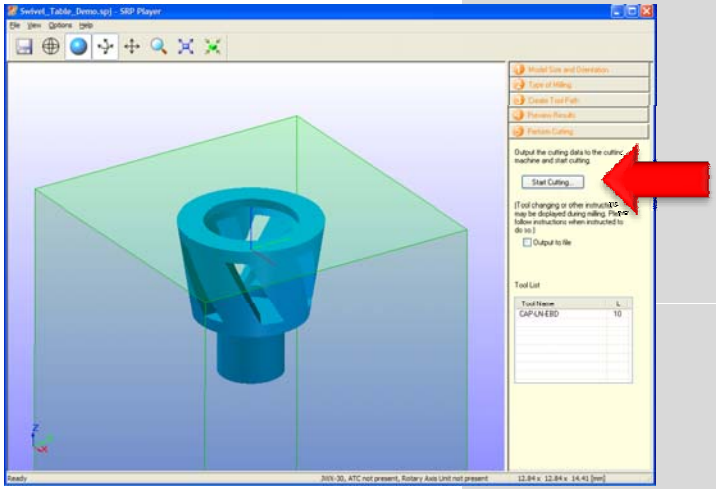
- Mount swivel clamp onto table adaptor.



NOTES:

Setup Swivel Clamp

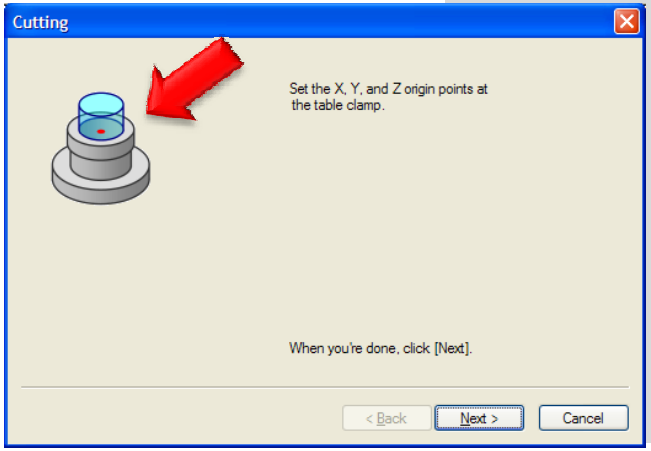
- You will be using SRP Player to “send” the table program to the JWX-30.
- Click on “Start Cutting” to begin.



NOTES:

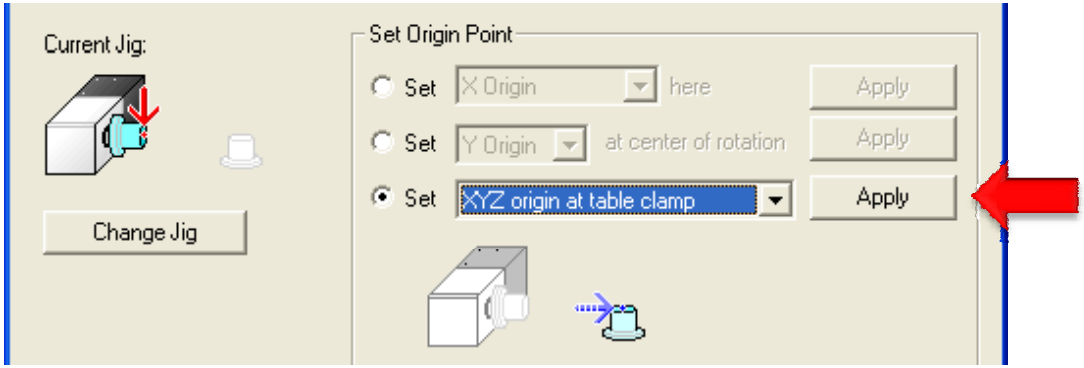
- The software will indicate where you need to set the origin points.

  DO NOT CLICK “NEXT” YET

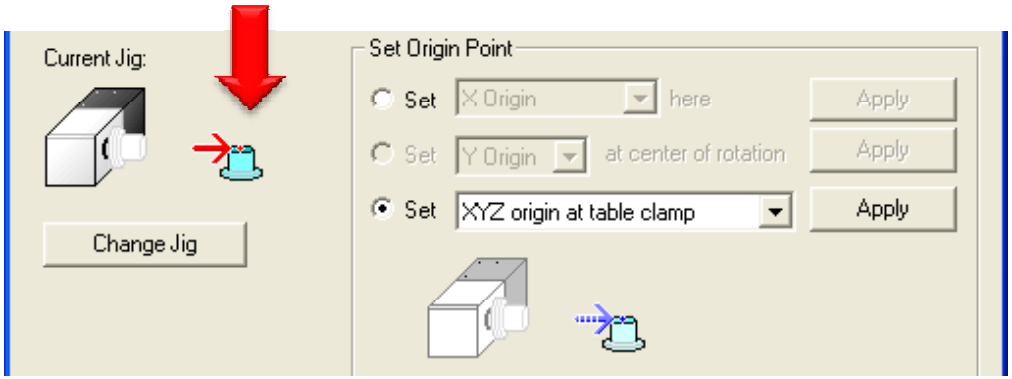


Setup Swivel Clamp

- Close covers and select “Set XYZ origin at table clamp” then click “Apply”.



- Once finished, the Vpanel will indicate where the origin is set using a red arrow on the fixture.

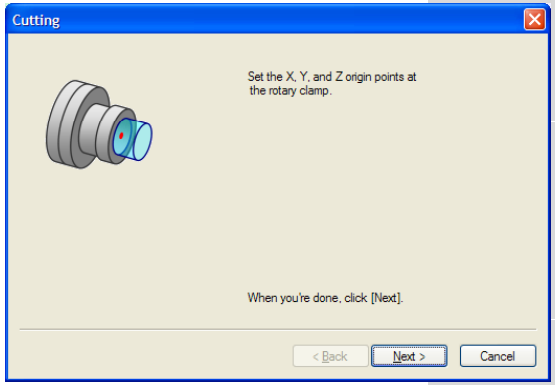


NOTES:

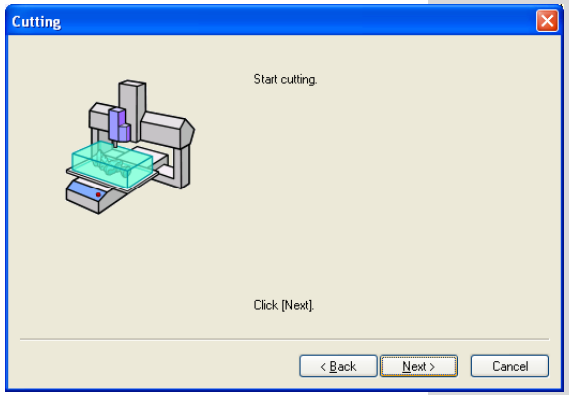
Setup Swivel Clamp

NOTES:

- Now that the origins have been set, click on “Next”.



- Click “Next” again to start the cutting process.



Setup Swivel Clamp

- Completed model.

NOTES: