

Longworth Style Chuck Instructions

Caution: Read and follow all Safety Rules And operating Instructions before using Products. Wood turning is inherently dangerous. Proper safety gear is mandatory while using the Longworth Style Chuck

General Use of The Longworth Chuck

Your Longworth Style Chuck is intended for use with plates, platters, bowls and other vessels as a holding aid on a wood lathe while removing the tenon previously held by a 4 jaw scroll chuck or a face plate.

CAUTION:

This Longworth Style Chuck is intended for use when making light finishing cuts only. It is NOT intended for use when attempting heavy stock removal. It is strongly recommended that the operator engage the tailstock with a live center as long as possible. That means all but the final 1" in the very center of the vessel.

Compression vs. Expansion Mode

Most operators will use the Longworth Style Chuck for gripping a vessel from the outside in – Compression. This is the recommended method when the sides are vertical or sloping in toward the base.

The Longworth Style Chuck may also be used in the expansion mode where the rim of the vessel slopes toward the center of the vessel rather than flaring outward.

Ready to use - No Assembly Required

Your Longworth Style Chuck is fully assembled and ready to use. You should not have to make any adjustments or assemble any additional parts.

All the Longworth Chucks are supplied with a steel mounting plate on the reverse side. The plate is designed to be gripped by any brand of 4 jaw scroll chuck using the standard 50mm #2 jaws that came with your 4 jaw scroll chuck. Straight Jaws may be used, but dovetailed jaws grip better due to their mechanical advantage and fit into the groove in the mounting plate.

** The 20" and 24" Longworth Style Chuck is significantly different than any other sizes. It can utilize up to 16 buttons, vs. 8, it must be used with a larger set of dovetailed steel jaws and utilize a substantial chuck such as a Vicmarc or OneWay Stronghold*

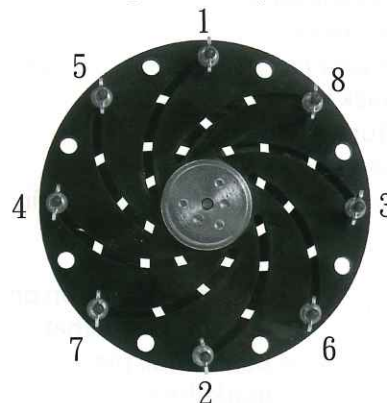
Vessel Mounting Procedure

Your Longworth Style Chuck is furnished with eight silicone Gripper Buttons. The buttons are designed to expand slightly when the wing nut is tightened. Therefore, you must follow a tightening sequence in order not to

push your vessel out of alignment. It must remain centered in order to achieve the best possible appearance for the bottom of your vessel.

Recommended vessel mounting procedure is as follows:

- 1) Place your vessel on the workbench with the bottom sitting on the table.
- 2) Place your Longworth Style Chuck face down (buttons toward the workbench surface).
- 3) Rotate the two phenolic disks (with the slots) against each other until all of the buttons are gently engaging the vessel and it appears to be centered on the chuck.
- 4) Gently snug up the wingnuts. All you are trying to do at is to hold the vessel long enough to mount the assembly into a four jaw scroll chuck already on the lathe.
- 5) Pick up the whole assembly, vessel and Longworth Style Chuck and mount it into the four jaw scroll chuck. If the scroll chuck has dovetail jaws (Nova Chuck, Vicmarc, OneWay Smooth Jaws, etc.), the dovetail jaws should seat properly into the groove. If you are using straight jaws (OneWay standard, Barracuda, Apprentice, etc.) make sure that the mounting plate is seated against the face of the jaws covering the groove. Do NOT grip your Longworth Style Chuck on the outermost diameter of the mounting plate. The face of your steel jaws should not touch the phenolic material. Tighten firmly with the chuck key.



Secure the wing nuts just like you were changing a flat tire on your car. Work one wing nut then work the next one directly opposite

Imagine a car wheel. When changing a flat tire you don't secure the lug nuts in order, work from opposite ends and tighten each nut accordingly. Tighten in sequence: Tighten wingnuts just barely snug so there is no play first. Then follow the drawing above in numerical order: 1, 2, 3, 4, 5, 6, 7 and 8.

Take three (3) full turns on each wingnut in sequence and your vessel should remain dead center and the buttons should be equally slightly bulging.

If it is off a little to one side, loosen one (1) turn only the two wing nuts on the side where you need the vessel to move toward. Then tighten one (1) turn only the two wing nuts on the side where you want to move it from. You may need to tap the vessel lightly in order to get it to move.

That should do it. Anymore tightening and you may wish to start over. Over tightening of the buttons will result in splitting the buttons which will require replacement.

Using the Tailstock and Live Center

It is strongly recommended that the operator engage the tailstock with a live center as long as possible. That means all but the final 1" in the very center of the vessel. Cutting without the tailstock providing support almost always results in chatter and the vessel dislodging from the chuck. Best Practices dictate that an operator utilizes the tail stock and live center as long as possible.

All types of sanding may be accomplished without the tailstock in place, but you can guarantee success if you sand with the tailstock in place for everything but the last 1" nubbin. When everything is finished except the very center, move the tailstock out of the way and finish normally.

Starting the Lathe Under Power

Recheck all of your adjustments and make sure your Longworth Style Chuck assembly is secure.

Spin everything by hand and observe the chuck checking for wobble. If the chuck does not run smoothly, it is not seated properly in your four jaw scroll chuck. Loosen the steel jaws with your chuck key and rotate the Longworth Style Chuck ¼ turn and tighten again. Spin by hand again. If the wobble has been eliminated, double check the tightness with your chuck key and spin by hand again.

Engage the tailstock with live center against the tenon on the bottom of your vessel. If this is a re-work piece that is already finished, you may wish to use a small piece of wood or other material so as not to mark the bottom of your vessel.

When everything looks correct make sure that your lathe speed is set to a SPEED LESS THAN 600 RPM. To begin with, the slowest possible speed is suggested. Stand to the side and wear a full face shield and turn the lathe on.

CAUTION: NEVER EXCEED 600 RPM

Failure to do so may result in your project dislodging from the Longworth Style Chuck. This may damage the chuck which is not covered by warranty or may result in serious injury.

When your Longworth Style Chuck is rotating smoothly and the tail stock is properly positioned, use your chisel(s) of choice to remove the tenon and shape the bottom of your vessel.

Shop Note

The Longworth Style Chuck applies a significant amount of pressure on your vessel. If you leave it mounted in the chuck, especially green wood vessels, this could result in permanent deformation of the vessel.

The silicone buttons may be subject to deformation if the wingnuts are left tightened for long periods of time. Loosen each wing nut when you are finished using your Longworth Style Chuck at the end of each session.

Care and Cleaning

Regular clearing of shavings with compressed air is recommended. Regular cleaning of shavings with compressed air is recommended. your Longworth Style Chuck for the day, loosen the wing nuts and wipe the chuck down with a damp cloth. Although phenolic is impervious to chemicals and detergents the silicone is not so hardy. Occasional cleaning with mild soapy water followed by a thorough drying is recommended.

Warranty

Your Longworth Style Chuck is warranted to be free from defects in materials and workmanship for one year from the date of purchase. No guarantee is expressed or implied as to the ability of your
that your Longworth Style
Chuck is the correct appliance for any particular application. That must be your done with your best judgment

Wooden vessels often have defects in the material which may cause them to disintegrate unexpectedly. You are urged to exercise all caution including proper protective gear when engaging your project. Catches or dig-ins may also cause the vessel to dislodge from your Longworth Style Chuck. May result in injury or damage the chuck which is not covered by warranty.

Capacities and Sizes

The Longworth Style Chucks are available in various sizes. Current sizes are listed below along with the capacities.

Chuck Holding Specifications

Nominal Size	Suitable for lathes with a swing of at least	Maximum Capacity In Compression (Outside)	Minimum Capacity In Compression (Outside)	Maximum Capacity in Expansion (Inside)	Minimum Capacity in Expansion (Inside)
10"	10" Swing	8"	4½"	9½"	5¼"
12"	12" Swing	10"	4½"	11½"	5¼"
14"	14" Swing	12"	4½"	13½"	5¼"
16"	16" Swing	14"	4½"	15½"	5¼"
20"*	20" Swing	18"	6½"	19½"	7¼"
24"*	22" Swing	22"	6½"	23½"	7¼"

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Available Longworth Chuck parts:

Button Assembly with Hardware 8 packs



Buttons Only 8 pack



Accessories and Replacement Parts

Replacement parts and current accessories are available.