

# NUTCRACKER KIT

## Kit Features

- Easy to turn; can be made closed end with Bushings. Alternative method is available.
- Minimal Parts--easy to assemble
- Sturdy Construction
- Classic Style

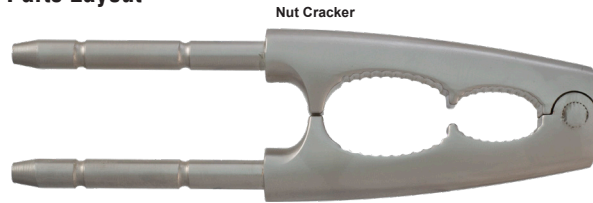
## Required Accessories

- 7mm Maxi-Mandrel, Handle Anything Chuck, or Spur Center
- Drill Bit: #PK-7MM
- Bushing Set(3pc): #PKSPCLBU uses one (1) End Bushing
- Digital Calipers if not using Bushing
- Barrel Trimming: 7mm trimmer #PKTRIM7
- Live 60° Tailstock
- 2 part Epoxy (CA is not recommended)
- Pen Blank Minimum Size: Two (2) 3/4" x 3/4" x 4"L

## Diagram B / Parts Layout



Only one (1) tube included.  
Used for turning and trimming  
- do not glue into blank

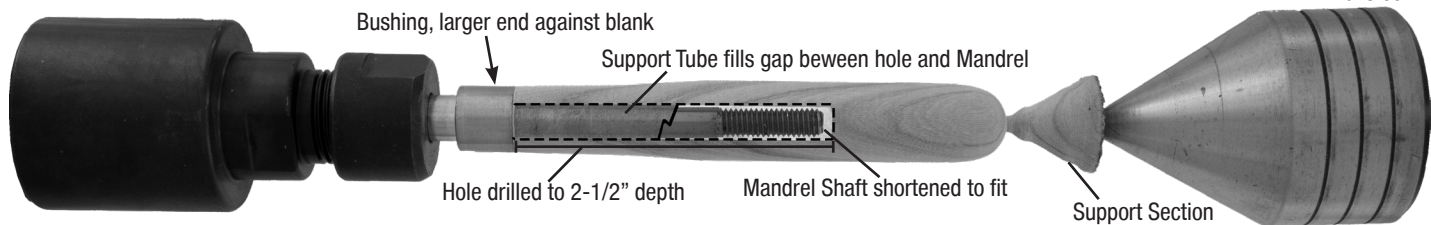


## Preparing the Blank:

- It is highly recommended to read and understand the instructions fully before cutting or turning this project.
- Cut blanks to a minimum 4 inches long. Handle length should be minimum 3-1/2 in. long. Handle can be made longer, but 1/4"-1/2" of extra length is need in addition to handle length for support section while turning.
- Drill hole lengthwise to a depth of 2-1/2 inches—this will give room for trimming.
- **Do not glue tube into blank.** Tube is only used as a trimming guide and for supporting the blank on the mandrel shaft while turning. Nutcracker shafts will not fit into the tube if you glue the tube in.
- To square the ends of the blanks, Use a 7mm trimmer. Slide 7mm tube over the pilot shaft of the trimmer and use this setup to trim the end (See Diagram E on back page). Do not excessively trim. The goal is not to trim to the tube length, but to make sure the end is square. Only trim until a full circle of trimming is seen on the end.

## DIAGRAM C / TURNING WITH BUSHING

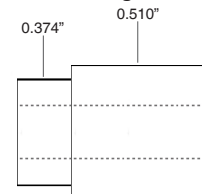
Headstock: Handle Anything Chuck shown



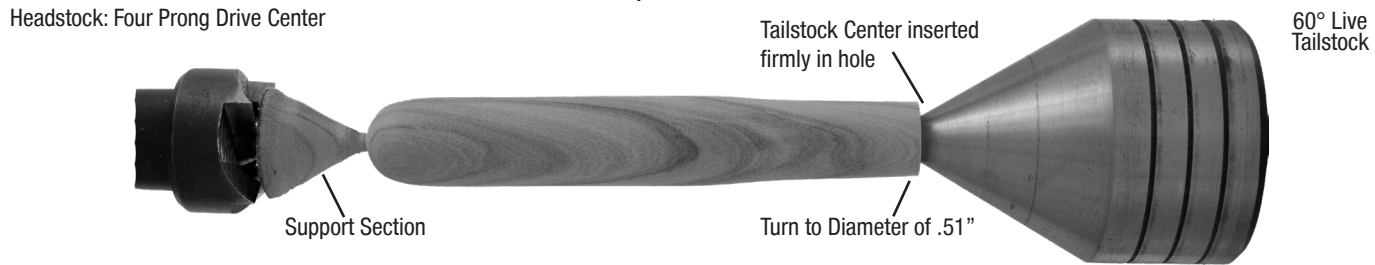
## Turning the Blank (with Bushing):

- Insert Support Tube (**do not glue tube**) into Blank. Adjust and lock the length of the Mandrel Shaft until Blank can sit tightly against the Bushing.
- Mount the Bushings and blank according to Diagram C.
- Slide the Tailstock up and push blank against the bushing so blank is, inserting the live center point into the end of the blank. Do not force blank to align near a marked center, just make sure the is no gap around bushing.
- Lock Tailstock and hand tighten the quill adjustment with wheel to steady the Blank. Do not over-tighten!
- Using sharp tools, turn the blank round. Mark off handle length and trim down the remaining length for support while shaping the handle.
- Turn blank down close to the bushing diameter. Turn the barrel straight or to a profile of your choice. Do not part off the support section until blank is almost fully sanded and polished.
- Sand the blank down to be flush with the bushings, gradually increasing sandpaper grits.
- Finish the barrel using your choice of polish. Allow sufficient time for the polish to cure—refer to polish manufacturer's instructions.
- Carefully Part off Support Section. End of handle must now be sanded and finished by hand.
- Remove Blank and slide out Support Tube. Mount a second Blank the same as the first and turn the same way. It is recommended to mount the first Blank nearby to compare profiles and lengths for matching.

## Diagram C / Bushing #PKSPCLBU



Use single end bushing; larger diameter goes against Blank

**DIAGRAM D / TURNING WITHOUT BUSHING****Turning the Blank (without Bushing):**

- Draw line across diagonals on end of Blank to mark center. Line up point of Drive Center to center of end of Blank. Tap Center until prongs can bite into wood. It may help to drill a small hole to allow center to sink in further.
- Mount according to Diagram D.
- Slide the Tailstock up and insert the live center point into drilled hole.
- Lock Tailstock and hand tighten the quill adjustment with wheel to steady the Blank. Do not over-tighten or tailstock may split the blank!
- Using sharp tools, turn the blank round. Mark off handle length and trim down the remaining section for support while shaping the handle.
- Turn the barrel straight or to a profile of your choice. Turn tailstock side of blank to a diameter of .51 in. using digital calipers. Do not part off the support section until blank is almost fully sanded and polished.
- Sand the blank, gradually increasing sandpaper grits.
- Finish the barrel using your choice of polish. Allow sufficient time for the polish to cure—refer to polish manufacturer's instructions.
- Carefully part off Support Section. Be sure to have a way to catch blank as it will fall once support is removed
- End of handle must now be sanded and finished by hand.
- Mount a second Blank the same as the first and turn the same way. It is recommended to mount the first Blank nearby to compare profiles and lengths for matching.

**Assembly:**

- **Do not glue tube into either handle.** Nutcracker shafts are 7mm and will be glued directly into the holes. They will not fit into the tube.
- Mix a moderate amount of 2 part epoxy and smooth into the holes in both handles.
- Smear epoxy onto shafts of the Nutcracker. Make sure to apply a generous amount in the indents to help keep handles in place.
- Carefully insert shafts into the handles. Hole may become airtight and push epoxy out as the pressure builds. Be prepared for cleanup. You may wish to use blue tape on the edges of the handles and nutcracker to facilitate easy removal of spillage.
- Allow Epoxy to Fully cure before use.

**DIAGRAM E / TRIMMING SETUP**