



1/21/2021

201 Old Homestead Hwy.  
N. Swanzey, New Hampshire 03431

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## WTC CUSTOM SIZING DIES

Your new full length custom die is made with body and top die of a high wear resistant chrome vanadium tool steel. All diameters are ground straight and concentric to within .0002". Rockwell C Scale is 63 to 64. The outer housing is pre heat treated 4140. Your die should last a lifetime with proper care. Lower capture ring is also hardened and ground.

All dies are sent out set up with a minus .006" head space when used with a standard .125" shell holder. Included are a set of shims ( 2-.001, .002, .003, .004 and a .005) to allow you to adjust the die head space to match your brass.

We recommend either starting with new brass or annealing brass that has been run through a commercial die. The hardness of the brass influences how much the die will move it. If your brass is work-hardened and inconsistent from using a commercial die, you may get inconsistent results from your new die.

### *Care and Maintenance*

- Always clean your brass prior to sizing; make sure it is free of tumbling media and range contaminants
- Always lubricate your brass prior to sizing. Like with all dies, consistency counts.

### *Operation*

- **Set up;**
  1. Remove the threaded reducer from your Rock Chucker or like press with 1 ¼ - 12 thread. Clean off any excess paint from the top surface, stoning any burrs or nicks of the top surface.
  2. Screw in the die assembly as you would any other, setting the pre load to cam on the ram. Lock the large ring of the body assembly **WITH YOUR HAND ONLY**. There is a great amount of locking leverage with this ring, and any excess force will make it very difficult to loosen. There is a pin wrench enclosed that will assist you via a corresponding hole in the side of the lock ring should the need arise.
- **Adjusting Head Space:**
  1. Inspect your fired brass to determine a measurement of the shoulder dimension.
  2. Run a few pieces and inspect again. The smaller lock ring at the top and its' knurled cap is what captivates the internal dies securely to the lower retaining ring. Loosen both prior to removing the lower ring to add/subtract spacer shims. Tighten the lower rings' three screws first, then the top portion of the assembly. If you find it more convenient to remove the die from the press to make this change, be sure to set your pre load and lock again.



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Tips:

1. Please note that each cartridge stack length is different and will require its own spacer. By that, we mean the spacer atop the neck/shoulder bushing that allows the upper retainer to reach the stack. Without this spacer, your inserts will float and you will not have any shoulder bump.

2. Adding shims lengthens the insert stack, and thus, will lessen the amount of shoulder bump your die gives you. Removing shims will shorten the stack height and thus, will push your shoulder back further.

3. When installing inserts in your die body, be sure that all are clean and lubricated. It is easiest to install the body sizing sleeve first, from the top of the housing. Slide it in until the top of the insert is just above the bore of the housing. Now set the neck/shoulder bushing on top of the body sleeve and slide the two in together until the body sleeve rests on the lower retaining ring. Insert the spacer mentioned in tip #1 and lock it down with the upper retaining cap.

4. We recommend STP engine oil treatment as a case lubricant. Others are acceptable and a matter of preference. We do not recommend using water based lubricants, as there is great potential to rust the die.