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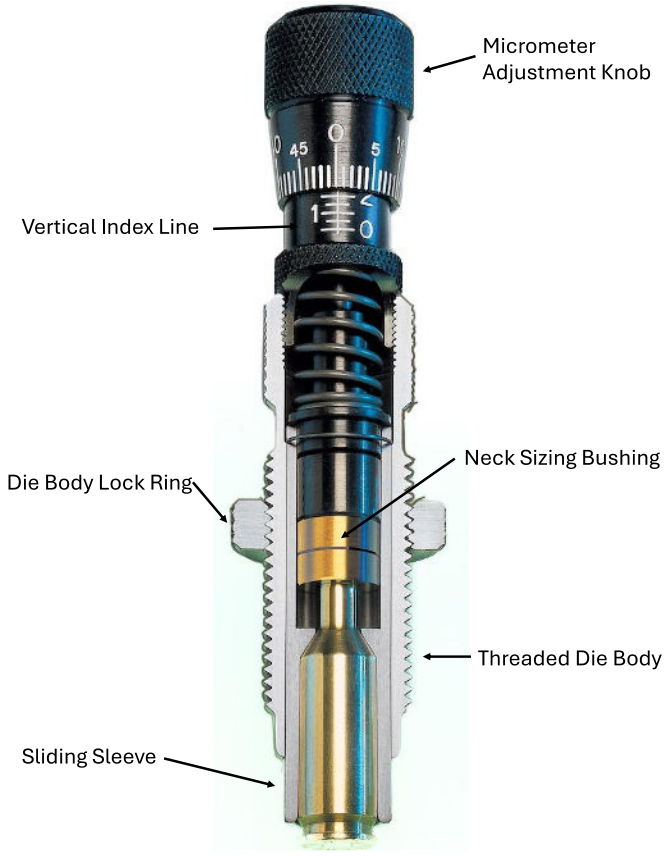
Competition Bushing Style Neck Sizing Die Instructions

Congratulations! Your purchase of the Redding Competition Bushing Style Neck Sizing Die brings a new level of precision to your handloading using interchangeable neck sizing bushing.

Introduction

The Redding Competition Bushing Style Neck Sizing Die has many unique features that you should become familiar with.

- It features an internal sliding sleeve which supports and aligns your cartridge case with the neck sizing bushing before any of the sizing process begins.
- Interchangeable bushings allow you to precisely choose the proper amount of neck sizing for your circumstances.
- Bushings are available in .001” increments from 17 cal. thru 30 cal.
- The adjustable length decapping rod and micrometer adjustment of the bushing position make it possible to resize any portion of the neck length desired.
- Bushings are available with a Titanium Nitride surface treatment for those who want lubeless neck sizing.
- Optional carbide size button kits are available for those who wish to use a size button to gain additional control of the inside diameter of the neck.



To become more familiar with the operation of this die you want to take it apart for further inspection.

Disassembly

Disassembly may be accomplished in the following manner:

- The entire micrometer may be removed from the die body by grasping the knurled portion of the die body in one hand and the knurled base of the micrometer with the other.
- Twist *counterclockwise* and the micrometer assembly will unscrew from the die body. The return spring, sliding chamber sleeve, spring seat and bushing pusher will now slide out of the die body for inspection.

Bushing Installation

At this point you can remove the spring seat and bushing pusher from the sliding sleeve to insert the sizing bushing of your choice. (See To Determine Bushing Size)

Clean and Oil

Upon reassembly, check to be sure that all parts slide freely. Keep all parts clean and free from abrasive dust and residue. If cleaning becomes necessary, simply wipe all sliding parts with a good grade bore solvent and follow with a light application of quality gun oil.

It should not be necessary to disassemble the micrometer assembly. The hole in the top of the micrometer barrel is <u>not</u> an oil hole. It provides access to the decapping rod adjustment set screw. (See Decapping Rod Adjustment)

Case Preparation

To get the most from your Competition Bushing Style Neck Sizing Die you should become familiar with the basic case preparation procedures used by benchrest and other competition shooters.

Cartridge case uniformity is the secret ingredient

At the very least you should segregate your cases by manufacturer's lot number and sort them for uniformity. It has been demonstrated that cases that are uniform in neck wall thickness, as received from the manufacturer, will remain straighter throughout the reloading, firing and reloading cycle.

Set Up Procedure

The Redding Competition Bushing Style Neck Die may be used in most reloading presses with 7/8" – 14 threads. When installing the die in your reloading press it is **very important** to allow a **slight clearance between the shellholder and the threaded die body.**

Damage to the die body may result from the shellholder making contact under the forces possible in a reloading press. Under these conditions the die body may eventually become swaged to the point that the internal sliding sleeve no longer functions.

Note: Damage may also result from a micrometer setting that is too low to allow full compression of the internal sliding sleeve. (See Micrometer Adjustment) If in doubt, turn the micrometer *counterclockwise* two or three turns to ensure clearance and proceed.

The best procedure is as follows:

- Place the shellholder in the press and raise the ram to its uppermost position.
- Screw the die in place until the threaded die body makes contact with the shellholder. (This will compress the sliding sleeve fully.)
- If the sliding sleeve will not compress fully, turn the micrometer counterclockwise until it will.
- Turn the die body *counterclockwise* until the micrometer graduations are in front for easy reading.
- Lock the die in this position by means of the 7/8”- 14 lock ring provided.
- This method will allow clearance between the sliding chamber sleeve and the die body.

Micrometer Adjustment

A neck sizing bushing must be in place for this adjustment. If the above set up procedure was followed correctly the micrometer adjustment is now high by a turn or two which would result in sizing part of the neck length.

- Place the shellholder in the press and raise the ram to its uppermost position.
- No cartridge case should be on the shellholder at this time.
- Adjust the micrometer *clockwise* until you feel it stop.
- The sizing bushing is now adjusted to its lowest position possible.
- **You should now back the micrometer away from the bushing *counterclockwise* a minimum of .005”. This is the minimum amount of clearance that will prevent damage to the die (See Set-Up Procedure.)**

The above micrometer adjustment is for sizing the maximum length of the case neck possible. If you wish to size only 1/2 or 1/3 of your case neck, turn the micrometer *counterclockwise* the desired amount. Each turn represents .050” as marked on the micrometer barrel.

Decapping Rod Adjustment

After the micrometer is adjusted following the procedure above, the decapping rod may require adjustment. The ideal position will remove spent primers, yet not allow the decapping rod to make contact inside the cartridge case.

The easiest method to determine the position of the decapping rod is to compress the sliding sleeve fully and note the protrusion of the decapping pin itself. It should protrude from the die body 1/8” to 3/16” to properly remove spent primers. A good gauge is the thickness of two nickels. A simple way to accomplish this with the die out of your reloading press is to remove the return spring from the die and turn the die upside down to observe the primer pin protrusion.

The decapping rod is retained in position by a set screw accessible through the top of the micrometer barrel. Insert a 3/32” hex key through the hole to engage the hex socket of the set screw. This set screw makes contact with and secures the decapping rod. *Counterclockwise* adjustment will loosen the set screw and allow

adjustment of the decapping rod. Each turn of the rod will equal 1/32”. Once the proper adjustment is made, retighten the set screw to secure the adjustment.

Any major change in micrometer setting will require a corresponding readjustment of the capping rod.

Lubrication

You should always visually inspect and clean your cases prior to resizing. The inside of the necks should be cleaned with a case neck brush to remove the abrasive residue.

Sizing bushings are available in Heat Treated Steel and with a Titanium Nitride surface treatment. Redding recommends case lubricant for all neck sizing operations to reduce the stress imparted to the case.

To Determine Bushing Size

The proper bushing size can be determined by measuring the outside neck diameter of your loaded cartridges with a precision micrometer. From this measurement, subtract .002”. This allows for brass spring back and will result in proper press fir for the bullet.

Visit our website for the complete list of Bushing Sizes.

If you have any questions regarding the above procedures, please do not hesitate to contact our tech support members.

Email: techline@redding-reloading.com

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Lifetime Warranty Disclaimer:

All Redding Reloading Equipment has been carefully inspected prior to shipment and is fully warranted to be free from defects in materials and workmanship for life.

Any product or parts which prove to be defective will be replaced or repaired without charge if returned prepaid to the factory.

Note: We reserve the right to decline responsibility where misuse or careless handling is evident or where repairs or modifications have been made or attempted by others.