

User Instructions for the Bench Rest® Seater Die

Issue 10

1.0 GENERAL INFORMATION

The Bench Rest Seater Die is a non-crimping style seater die (except for the 30-30, which is a crimping style) that holds the bullet and case in perfect alignment while the bullet is press-fit seated. Complete die nomenclature is given in Figure 2 on the back page.

- A close-fitting, sliding Die Chamber (P-30) holds the bullet and case for their entire length. During the seating operation, it also holds the bullet, case, and Bullet Seating Stem (J-30 ULTRA) in a common axis to ensure match-grade alignment.
- The sliding Die Chamber has a concentric bullet channel that is just slightly larger per side than the bullet diameter. This tight fit ensures straight line (co-axial) seating.
- The hand-polished Bullet Seating Stem provides consistent reloads. It contacts the bullet ogive as far as possible from the tip.

2.0 SAFETY INFORMATION

- Always wear safety glasses.
- Keep complete, chronological records of all reloads. This load data is useful for future load development.

<input checked="" type="checkbox"/> Primer (manufacturer, type, lot)
<input checked="" type="checkbox"/> Case (manufacturer, overall length, neck wall thickness, number of times fired, comments)
<input checked="" type="checkbox"/> Powder (type, manufacturer, lot, charge)
<input checked="" type="checkbox"/> Bullet (manufacturer, type, weight, lot)
<input checked="" type="checkbox"/> Cartridge (overall length, comments)

- Brass from oversize or otherwise out-of-tolerance chambers that has not been full-length sized may not fit in this Die. A custom sliding Die Chamber may be required. See Section 6.0.

3.0 PREPARATION

3.1 Have a 7/64" short arm hex key (Allen wrench) available.

3.2 Prepare the cases

Inconsistent or extremely light bullet tension can be a root cause of bullet seating variation. Ensure your cases are properly prepared for accurate bullet seating:

- If the case neck walls vary in thickness, turn the outside neck to a consistent thickness using a **Forster Outside Neck Turner** (part numbers OT1010 or HOT100).
- If the cases need sizing, use a **Forster Bench-Rest® Full Length Sizing Die, Bushing Bump Sizing Die or a Bench Rest® Neck Sizing Die** to properly size the cases.

- As cases are repeatedly fired, neck walls can become work hardened (and hence less ductile). When this occurs, brass has a tendency to spring back more and not hold the shape of the sizing die. Annealing the case necks can extend their useful life and greatly enhance accurate loading. (For more information on case annealing, see Chapter 4 of *Designing and Forming Custom Cartridges for Rifles and Handguns* by Dr. Ken Howell.)

3.3 Prepare the Die as Follows

3.3.1 Clean the Die

Clean the inside of P-30 die chamber surfaces using a cloth patch saturated with gun-cleaning solvent. Dry the inside surfaces.

3.3.2 Fine-tune the Die

NOTICE

Because the die holds the bullet, case and Bullet Seating Stem in perfect alignment for straight line seating, even minor variations (0.005") in bullet seating depth may cause significant changes in accuracy.

To increase accuracy, experiment as to the best position to seat the bullet off the lands of the rifling. The overall length measured from the case head to the tip of the bullet is not as critical as the distance from the case head to the ogive (point at which the bullet contacts the lands of the rifling) as shown in Figure 1. Use the Datum Dial (DD1010) to measure this dimension. Refer to Table 1 for seating depth adjustment information.

Figure 1. Critical Cartridge Dimension

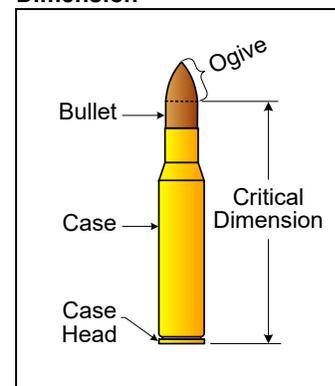


Table 1. Seating Depth Adjustment Information

Bullet Seating Stem (J-30) Adjustment	Bullet Movement	
	17-243 Caliber Seater Dies	257-375 Caliber Seater Dies
1/8 turn	0.004"	0.0045"
1/4 turn	0.008"	0.009"
1/2 turn	0.016"	0.018"

4.0 BULLET SEATING PROCEDURE

1. Ensure the Die Body (L-30) is securely threaded to the Sleeve (O-30).
2. With the press ram and shell holder at their highest points, screw the die into the press until the bottom of the sliding Die Chamber (P-30) touches the shell holder.
3. Continue screwing the die clockwise until you have fully compressed the sliding Die Chamber. Next, back it off at least one full turn because the Die Chamber should never be fully compressed when seating bullets.
 - a. Turn the Cross Bolt Die Lock Ring (G-10) clockwise into firm contact with the top of the press.
4. Tighten the Cross Bolt Die Lock Ring by using a 7/64" short arm hex key on the Die Lock Ring Screw (6-32 X 1/2").
5. Screw the Bullet Seating Stem (J-30) almost all the way out of the Die Body (L-30), but *do not* allow it to come out of the Die Chamber (P-30).
6. Lower the shell holder of your press.
7. Place a sample cartridge (setup round) of the correct length in the shell holder of your press.
8. Raise the shell holder to its highest position by pulling the press handle completely down.
9. Screw the Bullet Seating Stem down until it contacts the bullet of your "setup round".
10. Tighten the Lock Nut (A-10, K-30).
11. Remove the setup round from shell holder. The die is now properly set in your press for accurate bullet seating.
12. Check the cartridge length after seating the first bullet. Adjust the Bullet Seating Stem to lengthen or shorten the cartridge, if needed.

5.0 AFTER USE

Oil the die with a good quality gun oil before storing die until the next use.

6.0 CUSTOM MACHINING SERVICES

6.1 Custom-Fitted Bullet Seating Stem (J-30)

May be required in rare instances due to the many types of bullets on the market.

6.2 Custom sliding Die Chamber (P-30)

If available, Forster can use the reamer that was used to cut the manufacturer's rifle to make a customized Seater Die.

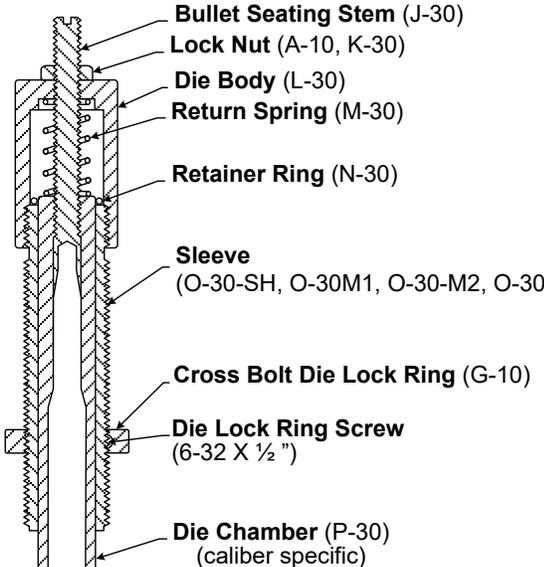
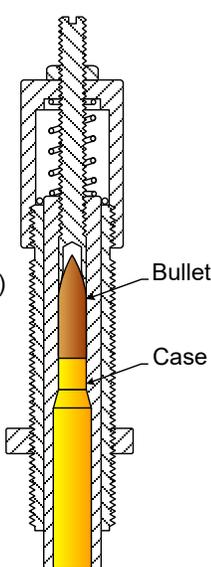
A complete list of services, including prices and lead times, is available on our website. Go to forsterproducts.com, then click **Resources | Custom Machining**.

7.0 REPLACEMENT PARTS

Every product component is available individually. A complete list of component order numbers and prices is available on our website. Go to forsterproducts.com, then click **Replacement Parts**.

For best prices, contact your Forster distributor. Experienced distributors are an integral part of the shooting sports. Please make frequent use of their knowledge and support them. If your distributor cannot supply you, please contact us by email, fax or phone.

Figure 2. Die Nomenclature

		Name	Number	Size	Used With
 <p>Die with Empty Die Chamber</p> <ul style="list-style-type: none"> Bullet Seating Stem (J-30) Lock Nut (A-10, K-30) Die Body (L-30) Return Spring (M-30) Retainer Ring (N-30) Sleeve (O-30-SH, O-30M1, O-30-M2, O-30-L) Cross Bolt Die Lock Ring (G-10) Die Lock Ring Screw (6-32 X 1/2") Die Chamber (P-30) (caliber specific) 	 <p>Die Ready to Seat Bullet</p> <ul style="list-style-type: none"> Bullet Case 	Lock Nut	A-10	10-40 thread	243 and smaller
		K-30	1/4-40 thread	257 and larger	
		Sleeve	O-30-SH	2.375" length	caliber-specific
			O-30-M1	2.625" length	
			O-30-M2	2.875" length	
			O-30-L	3.125" length	

WARRANTY

All Forster Products are warranted against defects in materials and workmanship for the life of the product. Parts excluded from the warranty are those that, by nature of their function, are subject to normal wear (such as springs, pins, etc.) or that have been altered, abused, or neglected. If the product is deemed defective by workmanship or materials, it will be repaired, reconditioned or replaced (at Forster's option). This warranty supersedes all other warranties for Forster Products, whether written or oral.