

“Why A Turret Press?!”

By Lee Love

Turret Presses are probably the least understood and most under-appreciated type of reloading press. This is unfortunate given the level of flexibility they offer.

Even if you are a diehard progressive press user, as I am, there are tasks that a progressive press just can't do. For instance, you simply cannot use a pass-through base sizing die on a progressive press. So a single-stage press becomes a handy thing to have. But, before rushing out to buy one, give some thought to the added advantages of a turret press. Although they are generally more expensive than a basic single-stage press, they may be less expensive in the long run as one turret press can do the same job as several single-stage presses ... and save space on your reloading bench.

What is a Turret Press?

Simply stated, a turret press has a rotating head (the turret) with multiple die mounting holes. The turret is rotated to align the desired die with the ram. The turret can hold as few as two dies, or up to seven dies, depending on the press manufacturer and model. Any combination of dies, powder measures, headspace gauges, etc. can be mounted on the turret ... in any order or combination you wish.

Available Turret Presses

- Harrell's Tooling Turret Press (2, 3 or 4 position): \$275.00 (4 position)
- Lee Turret Press (3 or 4 position): \$108.00 (3 position) [discontinued] / \$125.00 (4 position)
- Lee Classic Turret Press (4 position): \$165.00
- Lyman® T-Mag II Reloading Press (6 position) [discontinued]: \$274.95
- Lyman® Brass-Smith® All-American 8™ Turret Press (8 position): \$313.95
- RCBS Turret Press (6 position): \$297.86
- Redding T-7 Turret Press (7 position): \$539.85

* Prices are based on MSRP as of the date of publication and may have changed. Street prices may be considerably less.

It should be noted that the Lee Classic Turret Press is actually a progressive press on which the turret indexes (instead of the shellplate) with each cycle of the ram. Therefore, the dies must be installed in the order of use. However, it is possible to defeat the auto index by removing the Square Indexer Rod (Part #TP 2673) and, indeed, many reloaders do make this modification so they can operate the press in a single-stage mode. The remainder of this article will focus on manually indexed turret presses. I also will not go into detailed feature-by-feature comparison of the currently available turret presses.

Advantages of a Turret Press

Turret presses provide single-station simplicity with near progressive speed. Unlike a single-stage press, there is no need to unscrew one die and screw in the next die before performing the next press operation. Instead, you simply rotate the turret to the next die. This takes only a few seconds to do and the cartridge case remains in the shellholder, ready for the next reloading step ... saving a lot of time. If there are enough die locations on the turret, a cartridge case can be taken from start to finish without ever having to remove it from the shellholder. Following are several examples of reloading procedures using a turret press, that come close to duplicating the function of a progressive press.

Example 1: Progressive Reloading

Set Up:

- Station 1: Resize/Deprime die
- Station 2: Powder Measure
- Station 3: Bullet Seat die
- Station 4: Crimp die

Operation:

1. With the turret positioned at Station 1, place a cartridge case in the shellholder and cycle the ram to resize and deprime the case. On the down stroke, install a new primer.
2. Rotate turret to Station 2 and raise the ram. Cycle the powder measure to drop the powder charge into the case, then lower ram.*
3. Place a bullet on the case mouth. Rotate turret to Station 3 and cycle the ram to seat bullet.
4. Rotate turret to Station 4 and cycle the ram to crimp bullet.

* This procedure could be further automated by adding a case activated powder measure (e.g., Dillon Precision Auto Powder Measure or Hornady® Case Activated Powder Drop).

Example 1 is similar to operating a Dillon 550 progressive press; except you manually index the turret instead of the shellplate, and you have only one case on the press at a time. It also allows you to focus full attention on that single round, making it more likely that you will catch any problems if they occur.

Die hard single-stage press users will note that the above process requires the powder measure to be mounted on the press, which is not usually done. A powder measure mounted on a bench stand isn't subject to jostling around when the turret is rotated and, therefore, likely to yield more consistent powder drop weights. Yet, depending on the level of powder drop weight consistency you need, it is possible to mount the powder measure on the press, and still yield quality ammunition. After all, progressive presses all have powder measures mounted on the press. But, even with your powder measure mounted on a bench stand, you can still take advantage of a turret press to speed up the reloading process as demonstrated in Example 2.

Example 2: Semi-Progressive Reloading

Set Up:

- Station 1: Full-length Resize/Deprime die
- Station 2: Bullet Seat die
- Station 3: Crimp die

We'll assume a bench mounted powder measure. We'll also assume we are loading rifle cartridges and so don't need a case mouth expander die.

Operation:

1. With the turret positioned at Station 1, place a cartridge case in the shellholder and cycle the ram to resize and deprime the case. On the down stroke, install a new primer.
2. Remove case from shellholder, move to powder measure and drop powder charge into the case.
3. Place charged case in shellholder and place bullet on case mouth. Rotate turret to Station 2 and cycle the ram to seat bullet.
4. Rotate turret to Station 3 and cycle the ram to crimp bullet.

Example 2 allows you to drop the powder charge from a powder measure on a bench stand ... or even use a powder trickler ... yet you only need to load the cartridge case on the press twice to complete a cartridge. Obviously, you could also set each case in a loading block after Step 1 and charge all cases in a batch before going back to the press ... although that would not be as "progressive" as completing one cartridge before starting the next. Either way, the end result is very similar to loading using a single-stage press but with reduced cartridge handling and, once again, no need to remove and install any dies between steps.

Thus far the examples have demonstrated loading cartridges where a crimp die is used. But let's take a look at loading precision rifle cartridges, where neck tension holds the bullet and the case mouth is not crimped. For extra measure, we'll also gauge the COL (Cartridge Overall Length) while the cartridge is still on the press.

Example 3: Semi-Progressive Reloading of Precision Rifle Cartridges

Set Up:

Station 1: Bushing Neck Size die

Station 2: Bullet Seat die

Station 3: Dial Indicator Headspace Gauge (e.g., Redding Instant Indicator)

Operation:

1. With the turret positioned at Station 1, place a cartridge case in the shellholder and cycle the ram to neck size the case. On the down stroke, install a new primer.
2. Remove case, move to powder dispenser and drop powder charge (or pour a trickled charge into the case).
3. Place charged case in shellholder and place bullet on case mouth. Rotate turret to Station 2 and cycle the ram to seat bullet.
4. Rotate turret to Station 3 and raise the ram to check COL with dial gauge.

Once again, Example 3 is very similar to loading using a single-stage press but you only need to load the case on the press twice to complete a cartridge, and you don't need to remove and install any dies between steps. As pointed out in Example 2, you could also set each case in a loading block after Step 1 and charge all cases in a batch before going back to the press.

It should be noted that Example 3 is a shortened description of a procedure described in the article "Point of Engagement" by Robin Sharpless of Redding Reloading. That article describes how to use a T-7 turret press equipped with a Redding Instant Indicator to load rounds to a precise COL, and verify the COL of every round before it leaves the press. You can download the article in PDF format using the link below.

[Point of Engagement](#)

Imagine how time consuming this procedure would be if all you had was one single-stage press! Plus, depending on the model of turret press, there may still be unused die locations on the turret to add, for example, a universal decap die for case prep. You may even have enough stations remaining on the turret for another set of dies.

Now let's look at a reloading sequence that simply cannot be accomplished on a progressive press. That is using a Redding G-Rx Push-Thru Base Sizing Die for loading bulged .40 S&W brass. This example will also use a case activated powder measure.

Example 4: Semi-Progressive Reloading of Bulged .40 S&W Brass

Setup:

- Station 1: G-Rx Die
- Station 2: Full Length Resize/Deprime Die
- Station 3: Case Activated Powder Measure *
- Station 4: Bullet Seating Die
- Station 5: Taper Crimp Die

* e.g., Dillon Precision Auto Powder Measure or Hornady® Case Activated Powder Drop.

Operation:

1. With the turret positioned at Station 1 and the G-Rx shellholder/pushrod installed on the ram, place a cartridge case on the pushrod and cycle the ram to remove the bulge from the case. Complete all the cases in the batch before proceeding to Step 2. When finished, remove the G-Rx shellholder/pushrod and install the standard .40 S&W shellholder on the ram.
2. With the turret positioned at Station 2, place a cartridge case in the shellholder and cycle the ram to resize and deprime the case. On the down stroke, install a new primer.
3. Rotate turret to Station 3 and cycle the ram to drop the powder charge.
4. Rotate turret to Station 4. Place bullet on case mouth and cycle the ram to seat bullet.
5. Rotate turret to Station 5 and cycle the ram to crimp the case mouth.

You will notice that this is just like Example 1, with the addition of the G-Rx die. Of course you'll need to process all of the brass through the G-Rx die first since it uses a special shellholder/pushrod, then finish loading the cases using the remaining dies and a standard .40 S&W shellholder. But each case is handled only twice to complete a loaded round, and you do it all on one press. There is no need to buy an additional single-stage press just to use the G-Rx Die, but you will need a turret press with at least five stations on the turret.

Interchangeable Turrets

Don't forget that all turret presses have interchangeable turrets. You can buy extra turrets and keep all of your frequently used die sets installed and ready for immediate use. And, unlike progressive presses, it only takes a few minutes to swap turrets. With just a couple of additional turrets, you can have a wide selection of dies ready to go for many cartridges and to perform many different functions. Here are a couple of examples that may not be obvious:

- Case Prep Turret: Universal decap dies, primer pocket swagers, base sizing dies, bullet puller dies, etc.
- Case Forming Turret: Case forming and trim dies.

Of course you could use die lock rings that are split rings or that have a set screw, and swap dies in and out of a single turret.* This does save you the cost of buying extra turrets, but it is more time consuming than simply swapping turrets.

* Die lock rings of this type are available from Forster, Hornady, Lyman, RCBS and Redding.

Turret Prices

- Harrell's Tooling Turret – List Price \$35.00 (4-position) [2- & 3-position turrets also available]
- Lyman T-Mag II Turret (6-position) – List Price \$55.00
- RCBS Turret (6-position) – List Price \$59.95
- Redding T-7 Turret (7-position) – List Price \$105.60

* Prices are based on MSRP and may change. Street prices may be considerably less.

But Are Turret Presses as Strong and Accurate as a Single-Stage Press?

One might ask if a press with interchangeable turrets would be as strong and accurate as an O-frame single-stage press. One concern is that every die station may not be perfectly aligned over the ram. Another concern is that the turret will tilt under the force of the ram.

If the turret press is engineered and manufactured correctly, these concerns are not a problem. Modern CNC milling machines can easily hold tolerances below 0.001", so each die hole on the turret should be as accurately positioned as it is on any single-stage press. Tilting of the turret is prevented by a support, built into the press frame, which supports the turret at the rear.

One might think that the Redding T-7, which has the largest diameter turret of the available turret presses, would be the most prone to alignment issues. But below is a quote attesting to the accuracy of this press.

"The cartridges coming off the Redding were so concentric I had to keep checking the dial indicator to make sure it was working properly." – Joe D'Alessandro

The above quote is from "Handloading...The Wandering Narrative Part II" by Joe D'Alessandro and published on the Brownells web site. You can read the complete article at the following link.

[Handloading - The Wandering Narrative Part II](#)

What Can't Be Done on a Turret Press?

Thus far I've focused on the features and advantages of a turret press. To be fair, I should also point out that there are certain features that are not possible, or that are impractical.

- Case Feed – None are currently made for turret or single-stage presses.
- Bullet Feed – Certain bullet feeder mechanisms could, in theory, be installed on a turret press but are not practical. If you feel the need for speed, it is time to look for a progressive press.
- Powder Check Die – Although you could install a powder check die (e.g., Dillon Powder Check System, Hornady Powder Cop Die, RCBS Powder Checker), it is probably overkill on a turret press where only one cartridge is being loaded at a time. And, depending on the number of die stations on the turret, there may not be a die station available.

Final Thoughts

If you already have a single stage press, you won't need to start from scratch if switching to, or adding, a turret press. All of your dies and shellholders* will work ... as well as all of your miscellaneous reloading bench accessories and tools.

* Although currently manufactured shellholders from Hornady, Lee, Lyman, RCBS and Redding can be used on presses from any of those manufacturers, it is possible to find older shellholders that won't fit.

I hope this article has provided a little insight to the features, capabilities and potential benefits of a turret press. Their versatility makes them an attractive alternative to the traditional single-stage press. Before buying a single-stage press, you may want to take the time to consider a turret press instead. It may cost a bit more up front, but you will get a lot of bang for your buck. I've already decided that my next press purchase will be a turret press!