

# LEE

LEE PRECISION, INC.

## Auto-Drum Powder Measure

# 90811

### Progressive Press Configuration

### Single Stage / Turret Press Configuration

AP1646  
Hopper & Cover

FP2112  
8-32 x 3/8 Phillips

Clamp Knob  
AM3041F

O-ring  
SD2153

FP2641  
8-32 x 3/4 x 1/4 HEX

AP3041G  
Connecting Rod

AM3041H  
Latch lever

AM3041J  
Disconnector  
AM3041B  
Slider

FP2111  
6-32 x .25 Pan Head

AO1688  
Bead Chain

AM3563  
Disconnector  
Button

AM3866

## POWDER MEASURE ACCESSORIES

### Quick Change Drum Set

Features four precision molded nylon drums: (2) small, (2) large drums



# 90453

### Charging Die Kit

Includes short and long charging dies for bottleneck cases



# 90995

### Auto-Disk Riser

Raises the powder measure to clear other brands of dies when used in a multi-station tool head, like our Turret Press.



# 90041

Thanks for purchasing the Auto-Drum Powder Measure. This is an automatic case actuated drum powder measure that includes a double charge disconnecter that reduces the likelihood of double charging case on progressive presses. The Auto-Drum includes two infinitely adjustable drums. These will accurately and reliably drop charges from 1 to 80 grains of powder. Machined body with labyrinth groove mates to the precision molded nylon drums, providing a leak free fit with the finest powder. An elastomer wiper inside the body of the measure prevents powder shearing and works great with difficult metering extruded powders.

The hopper incorporates an on/off valve making powder changeover fast and convenient.

## **LEE** *Guarantee*

LEE RELOADING PRODUCTS are guaranteed not to wear out or break from normal use for two full years or they will be repaired or replaced at no charge if returned to the factory or if you supply a photo to [www.leeprecision.com/contact-us](http://www.leeprecision.com/contact-us)

Any Lee product of current manufacture, regardless of age or condition, will be reconditioned to new with a new guarantee, if returned to the factory with payment equal to one half the current retail price plus shipping.

### **CAUTION**

Ammunition reloading can be dangerous if done improperly and should not be attempted by persons not willing and able to read and follow instructions exactly. Children should not be permitted to reload ammunition without strict parental supervision. Always wear safety glasses when reloading and shooting. Ammunition loaded with these tools and data should only be used in modern guns in good condition. We do not accept responsibility for ammunition loaded with these tools or data as we have no control over the manufacture and storage of components or the loading procedure and techniques. Primers and gun powders, like gasoline and matches, can be dangerous if improperly handled or misused.

**Do not use black powder in this powder measure, as it can explode in bulk.** Selecting and charging powder is the most important thing you can do for both the safety and accuracy for your reloads. Be absolutely certain you have the correct type and amount of powder before you attempt to reload any cartridge.

### **WARNING**

Always make an uninterrupted up and down stroke when expanding or charging the case. If you become distracted and reverse direction, a double charge could result.

## 1 Select Appropriate Drum

The Auto-Drum ships with the small drum installed. Reference Lee Reloading Dies instruction sheet or Modern Reloading volume cc column to determine the cc's to dispense.

**NOTE:** The large drums can be converted to low capacity drums. See **Helpful Tips** on page 9.

### Small Drum

Maximum capacity is 2.8cc.



### Large Drum

Minimum capacity is 2.27cc and maximum capacity is 6.49 cc.



LEE "MODERN RELOADING"

STARTING LOADS

POWDER TYPE	START GRAINS	VOLUME CC	AUTO DISK	LEE DIPPER	VELOCITY FPS	NEVER EXCEED	VELOCITY FPS	PRESS	UNITS	MIN OAL
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LEE DIE INSTRUCTIONS

..... STARTING LOADS .....

Powder Type Start Grains Volume CC Auto-Disk Lee Dipper NEVER EXCEED Velocity FPS Min OAL

## 2 Use Lee Dipper or Safety Scale

You can quickly preset the approximate charge using a Lee dipper or a weighed charge. Then pour charge into metering chamber.



## 3 Adjust Drum

Insert adjustment key and rotate key until powder is flush with the face of the drum.

Return the powder to container.



## 4 Install Auto-Drum to Press

See pages 4-5 for Progressive Presses or page 6-7 for Single Stage or Turret Press

### Adjusting Charge using Adjustment Key

Each of the Quick Change Drums includes a key that you insert into the adjusting screw to make your adjustment. Each flat of the 10 sided key represents .01cc or about a 1/10 grain for the average powder. Light, fluffy powders are going to be less and more dense powders are going to be slightly more. But on average, it is 1/10 of a grain per flat.

## 4 Install Auto-Drum to Progressive Press

- A** Install Auto-Drum into the Powder Through Expanding Die. Orientate the Powder Measure so the disconnecter aligns with the shell plate carrier hole and tighten the knurled adapter.

Auto-Drum Powder Measure ships with a down-stroke verification device installed. This device allows only one activation of the powder measure after the disconnecter is pushed. On progressive presses, the disconnecter can be automatically activated at the bottom of the stroke by attaching the included bead chain. Once the case reaches the bottom of the stroke most progressives automatically move the case to the next position preventing a double charge.

- B** Position the powder measure so the disconnecter and bead chain is directly above the hole on the carrier.



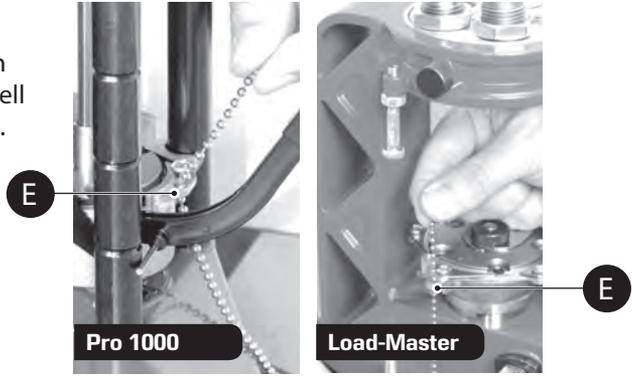
- C** Remove the activation button.

- D** Attach end bell to end of bead chain.

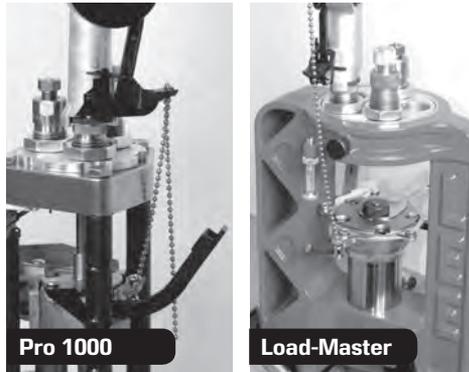


## 4 Install Auto-Drum to Progressive Press Continued

- E** Thread bead chain up through bottom of the shell plate carrier hole.



- F** Raise carrier to the mid stroke position, snap bead chain into the disconnecter where the activation button used to be.



- G** Lower the ram while lifting the loose end of the bead chain. The beads will snap through the disconnecter and rest in the proper position.



## 4 Install Auto-Drum to Single Stage Press or Turret Press

### Pistol

Screw powder measure into Powder Through Expanding Die. Thread the knurled swivel adapter down to the die. Orientate powder measure to a convenient position and secure.

**Turret Press users see page 6**



### REMEMBER:

A case must be present in the shell holder and the **disconnecter button** must be depressed to activate the powder measure and charge case.

### Rifle

Charging Die Selection:

**Short** (# 90668)

.86" to 1.76" long

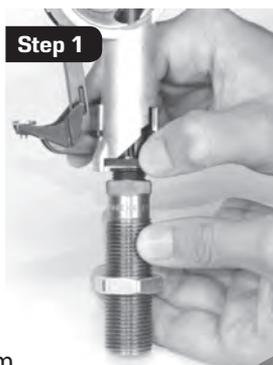
**Long** (# 90194)

1.76" to 2.62" long

**Turret Press users see page 6**

**Step 1:** Thread large or small charging die on to Auto-Drum knurled adapter completely. Thread lock ring up towards the top of the die.

**Step 2:** Insert case into shell holder and raise ram. Thread powder measure and charging die into the press until you feel it stop turning. The slider drop tube will rise to the dispense position. Orient powder measure to convenient position and finger tighten lock ring.



Dispense position

## 4 Install Auto-Drum to Single Station or Turret Press

**Step 1:** Install Auto-Disk Riser into charging die or powder through expanding die body.

**Step 2:** Slide the powder measure into the auto disk riser.

**Step 3:** Thread the knurled swivel adapter down to the riser. Align the powder measure to a convenient position and secure.



**Auto-Riser**  
SOLD SEPARATELY  
# 90041



When operating the Auto-Drum on a single stage or Turret press, depress the disconnecter before raising the ram.

Two conditions must be met to activate the powder measure.

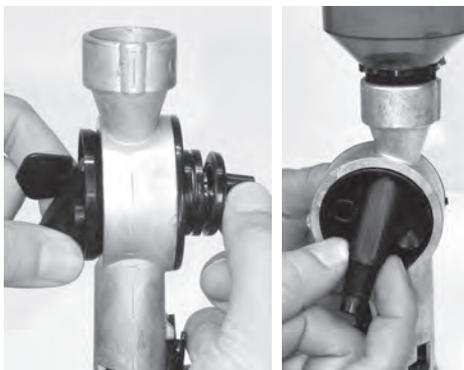
- 1) Case must be present in the shell holder.
- 2) The disconnecter button must be depressed.



## 5 Install Drum into Measure to Drop Charge & Verify

Install the drum with the metering rod facing down towards drop tube, aligned with the hopper on the Auto-Drum measure.

**Caution do not over-tighten the drum screw. If you do, it may bind the drum and prevent proper operation or damage to measure.**



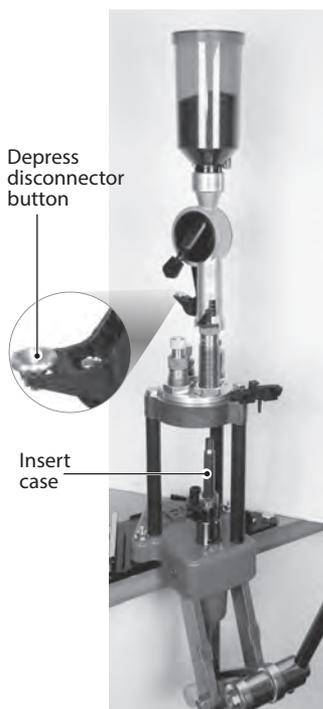
## 6 Dispense and Weigh a Charge

Insert case into shell holder/shell plate, verify hopper is turned on by turning counterclockwise, depress the disconnecter button, raise the ram and dispense a charge.

### CAUTION

**Be certain you have the correct type and amount of powder.**

Remove charged case, empty charge on to the scale pan to determine the weight. If charge is light or heavy, see instruction # 7 on the next page for adjusting the drum.



### REMEMBER:

A case must be present in the shell holder to activate the powder measure.



## 7 Adjust Charge

### Charge is Light

Each key flat on the key is about 1/10 of a grain. For example, if you are 3/10 of a grain light, rotate key counterclockwise 3 key flats to increase the charge. This will back out the metering rod, increasing the chamber size to drop more powder.

### Charge is Heavy

If charge is heavy, rotate the key clockwise to decrease the charge.

### Large Capacity Quick Change Drums

**NOTE:** when you dispense large charges, allow enough time for metering drum to fill and dispense. Cartridges like the 300 Win Mag can take up to 3 seconds to fill.

Rule of thumb: allow 1 second per cc for charging and dispensing the powder charge.



## 8 Remove the Key

Continue to dump charges and verify. Once it's set to your desired charge or slightly less, remove the key from the metering rod and place back into drums storage bracket.



### Nice Feature

You can use a #2 pencil and mark the type of powder and the charge on the flat surface. After you change or move to another one, simply erase and write something else.



# Helpful Tips

## Quick Change Drum Adjustment

On both the large and small drums, do not extend the metering rod past the end of the drum, because it will expose the o-ring on the drum and it may be difficult to reassemble.



## Convert Large Drum to Low Capacity Drum

If everything you reload is 223 cartridge size and smaller, you may want to reduce the capacity of large drum. To do this, remove the plug from the drum and install into the metering rod. This is a semi permanent change because it is a press fit into the metering rod. Slide it into the metering rod, and push firmly home with finger. Once installed, the minimum capacity is reduced to about .25cc's, suitable for the tiniest cartridges.



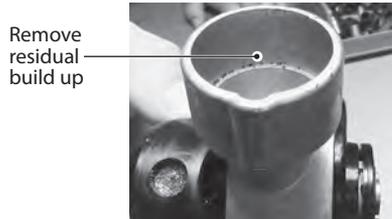
## WARNING

Always make an uninterrupted up and down stroke when expanding or charging the case. If you become distracted and reverse direction, a double charge could result.

## Change Drum Size or Powder Type

After removing the hopper, there will be some residual powder inside the powder measure where the hopper installs and where the drum installs.

To prevent cross contamination across powder types, you want to make sure this residual powder is removed. The powder measure incorporates a no leak groove that will accumulate fine grain powders, make sure that is cleaned as well. Leave the graphite that is built up on the surface of the drum and inside the measure, this acts as a lubricant.



## Removing Down-stroke Verification Device

This should only be done by experienced users. The disconnecter can be removed from the powder measure if you are using a charge that would overflow the case if a double charge would occur.

**Always use the down-stroke verification device when loading light target loads or fast burning powders that occupy less than two-thirds of the case capacity.**



**Step 1:** Unscrew the 6-32 x .25 Phillips screw to release the disconnecter down-stroke verification device.



**Step 2:** Use fingernail on thumb to remove latch lever. Slide up disconnecter along the connecting link to the upper portion of the rod and pull off.



**Step 3:** Slide the connecting link as far right as possible.

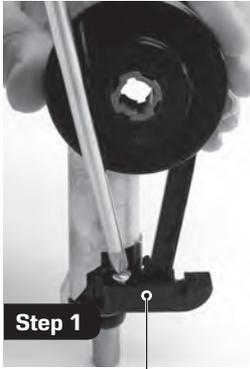


**Step 4:** Replace the screw in the hole adjacent to the body.

The powder measure will now dispense a powder charge anytime the case enters the die and raises the expander plug a half an inch. A double charge is now more likely if you become distracted during the expanding and charging process. A double charge will blow the gun up and cause serious or fatal injuries to the shooter or persons nearby.

## Restoring Down-stroke Verification Device

If you removed the down-stroke verification device (disconnecter) from the tool, and you want to return this safety device, follow instructions below.



Disconnecter

**Step 1:** Unscrew the 6-32 x .25 Phillips screw.



Disconnecter

**Step 2:** Install disconnecter by sliding on to the connecting rod.



**Step 3:** Re-install 6-32 Phillips screw to secure disconnecter.



**Step 4:** Clip on latch lever to slider drop tube. Install the pin in the screw hole

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