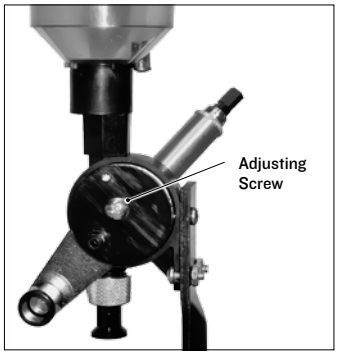
Empty The Measure To change powder, close hopper by rotating clockwise. Place a container underneath drop tube, then work the lever a few times to empty the powder below the valve. Now you can pull off the hopper and empty into the original powder can. Don't forget to turn valve on before starting to reload the next time. The powder valve is also positioned to act as a powder baffle to enhance the accuracy of your measure.

Rotor Tension Adjustment

When the measure leaves the factory the adjusting screw is set so 16 oz. of pressure is required to operate the lever. This setting is optimum for most powders. Extremely fine powders may leak very slightly at this setting. This causes no harm. Should you find it objectionable you may tighten the adjusting screw slightly. The rotor should never be so tight that more than four pounds are required to rotate lever.



Calibrate your powder or VMD not listed

To find the VMD of your powder, set your powder measure to 4.0cc. Drop the charge, weigh the charge in grains, and divide 4.0cc by the weight of the dropped charge. Mark this number on the powder container and you'll have it for reference in the future. Average of several samples increases accuracy and confidence.

$$\frac{\text{4.0 cc setting}}{\text{Grains weight of sample}} = \text{VMD}$$

Grain and cubic centimeters

The grain, as used to measure gunpowder, should not be confused with a granule or kernel of powder.

A grain was so named because it was the weight measure equal to one plump grain of wheat. A grain is a grain is a grain whether using avoirdupois, troy or apothecaries weight. The reloader uses the avoirdupois system where there are 7,000 grains or 16 ounces to one pound. The same system we use daily in the USA to buy and sell gunpowder, steak, potatoes, etc.

Don't confuse grains and grams, a gram equals 15.432 grains.
1.0 cc of water weighs 1 gram. So if you are ever curious about your case capacity, weigh your empty case in grams, fill the case with water and the difference between full and empty case tells you the useful case capacity in cc's.

grams x 15.432 = grains
grains / 15.432 = grams

Volume Measure Density (VMD) Volume of 1 Grain of Powder

This is a term we use to describe the average volume of one grain of a specific powder when metered by the average reloader.

The chart below is that part of a cubic centimeter that is needed to hold one grain of the powder specified. Cubic centimeter was selected as a standard not only because that is what the powder companies use, but a cubic inch is a comparatively large unit. To obtain the same degree of accuracy, it would be necessary to carry the number out two extra places.

To find the volume needed for any charge, simply multiply the charge in grains by the number behind the powder you are using. It is then easy to set your measure to that number.

ACCURATE	VMD
A NITRO100	0.1349
ACC MAG PRO	0.0663
ACCUR #2	0.0838
ACCUR #5	0.0623
ACCUR #7	0.0653
ACCUR #9	0.0657
ACCUR 1680	0.0655
ACCUR 2015	0.0730
ACCUR 2200	0.0694
ACCUR 2230	0.0657
ACCUR 2460	0.0656
ACCUR 2495	0.0748
ACCUR 2520	0.0683
ACCUR 2700	0.0685
ACCUR 3100	0.0748
ACCUR 4064	0.0755
ACCUR 4350	0.0740
ACCUR 5744	0.0752
ACCUR 8700	0.0688
LT-32	0.0771
SOLO 1000	0.1331

ALLIANT	VMD
ALNT 300 MP	0.0667
ALNT 4000 MR	0.0722
ALNT AR-COMP	0.0753
ALNT VARMINT	0.0651
RELODER 17	0.0697
ALLIANT STEEL	0.1063
ALNT 410	0.0804
ALNT E3	0.1489
AMER-SELECT	0.1341
BLUE DOT	0.0865
BULLSEYE	0.1064
GREEN DOT	0.1262
HERC 2400	0.0742
HERCO	0.1122
POWER PISTOL	0.0889
RED DOT	0.1413
RELODER 10	0.0746
RELODER 25	0.0707
RELODER 7	0.0728
RELODER12	0.0691
RELODER15	0.0706
RELODER19	0.0706
RELODER22	0.0697
UNIQUE	0.1092

HODGDON	VMD
BENCHMARK	0.0715
BL-C(2)	0.0645
CFE 223	0.0646
CFE PISTOL	0.0754
CLAYS	0.1462
H 50 BMG	0.0694
H LIL GUN	0.0678
H RETUMBO	0.0721
H TRAP100	0.1171
H-LVR	0.0653
H-PYRDX RS	0.0811
H-PYRODX P	0.0823
H-SUPRFORM	0.0658
H-VARGET	0.0731
H1000	0.0713
H110	0.0656
H322	0.0725
H335	0.0645
H380	0.0691
H414	0.0661
H4198	0.0750
H4227	0.0769
H4350	0.0725
H450	0.0653
H4831	0.0725
H4895	0.0728
H870	0.0686
HO US869	0.0651
HP38	0.0926
HS6	0.0712
HS7	0.0680
HYBRID100	0.0726
INTERNATIONAL	0.1266
LONGSHOT	0.0824
PYRODEX CTG	0.1015
TITEGROUP	0.0848
TITEWAD	0.1300
UNIVERSAL	0.1099
IMR 4007 SSC	0.0725
IMR 700X	0.1343
IMR 800X	0.1071
IMR 8208	0.0710
IMR PB	0.1205
IMR TRAIL BOSS	0.2172
IMR3031	0.0762
IMR4064	0.0745

HODGDON	VMD
IMR4166	0.0741
IMR4198	0.0792
IMR4227	0.0769
IMR4320	0.0716
IMR4350	0.0735
IMR4451	0.0713
IMR4831	0.0735
IMR4895	0.0728
IMR7828	0.0725
IMR7977	0.0707
SR4756	0.1100
SR4759	0.0993
SR7625	0.1046
AUTOCOMP	0.0787
SUPRM780	0.0684
WIN 231	0.0931
WIN 296	0.0656
WIN 748	0.0655
WIN 760	0.0666
WIN AA LITE	0.1266
WIN AA PLUS	0.1296
WIN ACTION PI	0.0810
WIN MAG RIFLE	0.0718
WIN SUPER HANDI	0.0859
wSUPER-FLD	0.0840
wSUPER-LIT	0.0847
wSUPER-TAR	0.1205

RAMSHOT	VMD
R COMPETITION	0.1278
R ENFORCER	0.0693
R HUNTER	0.0667
R SILHOUETTE	0.0796
R TRUE BLUE	0.0684
RAM BIG GAME	0.0708
RAM MAGNUM	0.0661
RAM TAC	0.0671
RAM ZIP	0.0816
X-TERMINATOR	0.0681

NORMA	VMD
NORMA 200	0.0738
NORMA 201	0.0728
NORMA 202	0.0747
NORMA 203B	0.0722
NORMA MRP	0.0707
NORMA URP	0.0718

SOUTH AFRICA	VMD
MP200	0.0892
MS200	0.1061

VECTAN	VMD
VEC AO	0.1196
VEC BA10	0.1350
VEC BA9	0.0919
VEC SP10	0.0668
VEC SP3	0.0682
VEC SP7	0.0658
VEC SP8	0.0682
VEC SP9	0.0682
VEC TU2000	0.0762
VEC TU5000	0.0720
VEC TU7000	0.0704
VEC TU8000	0.0704

VIHTAVUORI	VMD
v-3N37	0.0913
v-N105	0.0900
v-N110	0.0833
v-N120	0.0776
v-N130	0.0754
v-N133	0.0770
v-N135	0.0777
v-N140	0.0733
v-N150	0.0746
v-N160	0.0734
v-N165	0.0712
v-N170	0.0713
v-N310	0.1214
v-N320	0.1210
v-N330	0.1079
v-N340	0.1066
v-N350	0.0977
v-N540	0.0701
v-N550	0.0692
v-N560	0.0690

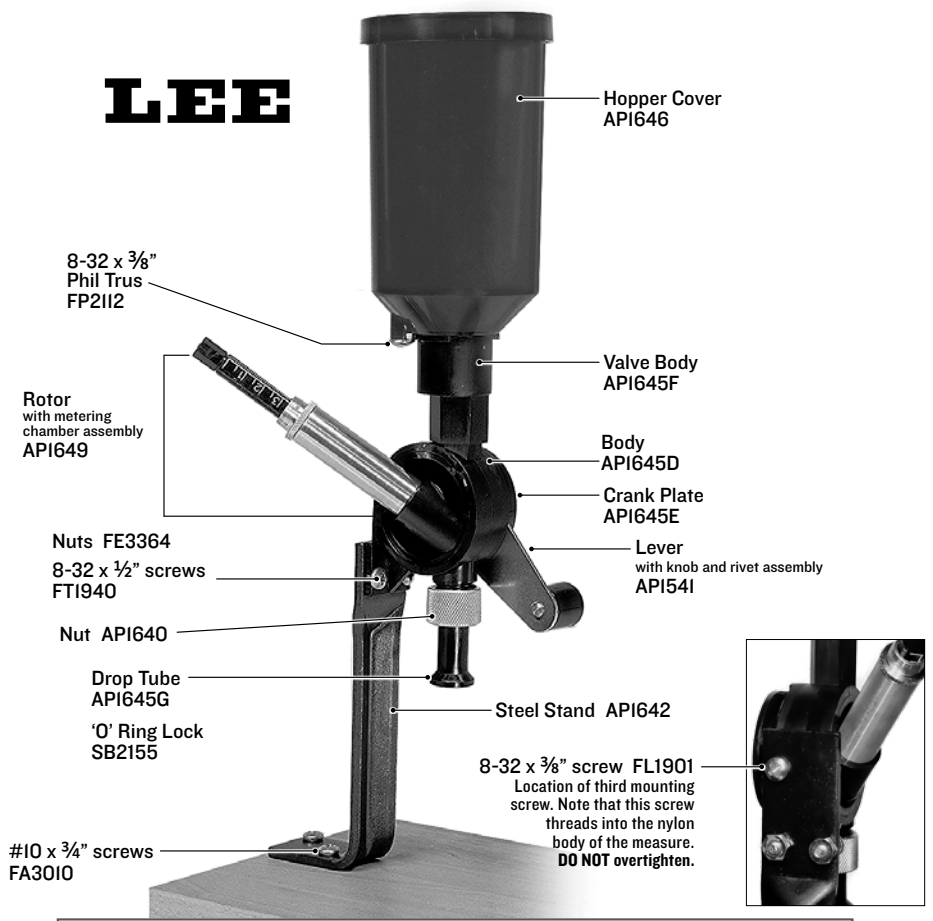
Numbers are approximate. To find out the exact volume of any powder see **CALIBRATING YOUR POWDER** on the previous page. It is so very easy to do and saves a great deal of time when setting your measure.

PRINTED IN THE USA

LEE
4275 Hwy. U · Hartford WI 53027
www.leeprecision.com

COMPLETE INSTRUCTIONS FOR THE

LEE PERFECT POWDER MEASURE



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

API1704

IMPORTANT! YOU MUST DO THIS BEFORE USE

If using the measure for the first time, you must process at least one hopper full of powder through the measure to coat the nylon parts with graphite from the powder. This conditioning is important so static electricity will be bled off. Otherwise, you'll find the measure continues to dispense charges progressively heavier. This need only be done once.

The lever should be turned at a uniform, slow to moderate speed to a full stop in both directions. If using a large charge you must pause in both directions to permit the metering tube to fill and empty. You will be able to see the powder move in the hopper while the tube is filling.

The Lee Perfect Powder Measure is built to give you a lifetime of unmatched accuracy. Unlike other powder measures, you can use any type of smokeless powder. Because black powder explodes in bulk, it should not be used in this powder measure. Most powders will be dispensed in such uniform charges that you will think your scale is stuck. Extruded powders, such as most IMR powders, work just fine. They do not meter quite as well, but you can expect charges more uniform than possible with any other measure. This is possible because of the elastomer wiper, which levels the metering chamber without cutting the powder. The charge is more uniform and the measure operates much smoother.

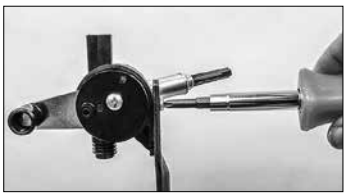
The housing, rotor and adapter are all made from nylon. The metering tube is aluminum. These materials are non-sparking, low friction and lightweight.

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.

① Mount Your Powder Measure

For bench mounting, attach the powder measure to the stand with the (2) #10 x ¾" (FA3010) screws supplied. Attach the base to your bench or suitable base for portable use. Use an ample size base. You may also "C" clamp the stand to your bench.



② Attach body to stand using 8-32 x ⅜ pan head Phillips screw (FLI901)

Insert (2) 8-32 x ½" screws (FT1940) through body and steel stand and tighten with (2) nuts (FE3364)

Insert drop tube into body; screw knurled nut (AP1640) tight to body.

③ Setting and Reading the Micrometer

Loosen the thimble so the metering rod can be turned freely to any setting you desire.

The metering rod is calibrated in cubic centimeters; you'll be able to see one through a little over seven and one half. If you have been loading with Lee Dippers you can easily set the powder measure to your favorite load by setting to the dipper number, or reference the volume cc column in "Modern Reloading" or your Lee die set instructions.

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

LEE DIE INSTRUCTIONS

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

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

Metering rod requires 10 full turns to move one cc., therefore one turn is 1/10 (.1 cc)

The micrometer thimble has 10 graduations. Each is 1/10 of a turn is 1/100 (.01 cc)

A dense powder, such as H4895, one line on thimble will change powder charge a little over 1/10 (.1) grain.

Multiply the charge in grains by the volume of 1 grain (see VMD chart on rear) of the powder you are using. The answer is in cubic centimeters and this is the setting for your measure.

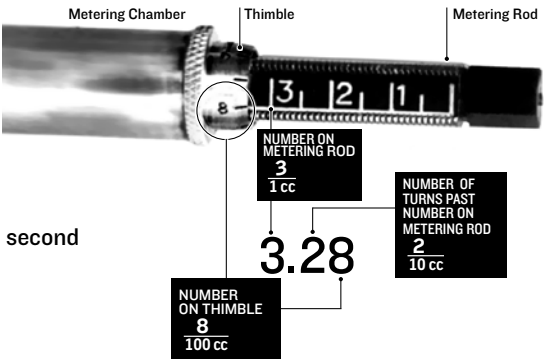
Example: Desired charge is 43 grains of IMR3031. Check the chart to find the volume of 1 grain is .0762.

Then .0762 x 43 grains = 3.28 (rounded off) cubic centimeters.

■ Turn the thimble to the number 3 on the metering rod for the whole number to the left of the decimal point. The #3 indicator line must be visible when the thimble is at zero.

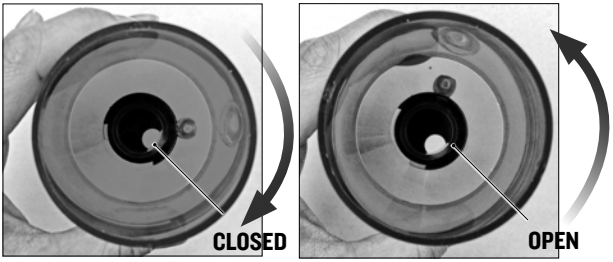
■ Turn 2 extra turns for the first number to the right of the point.

■ Turn 8 marks on the thimble for the second number to the right of the point.



④ Add/Change Powder

Add powder to hopper, be certain of brand and type. Rotate counterclockwise to open valve, rotate clockwise to close valve.



CAUTION USING THE WRONG TYPE OR WRONG AMOUNT OF POWDER CAN CAUSE A SERIOUS OR FATAL INJURY

⑤ Turn on the flow of powder by rotating hopper counterclockwise.

⑥ Cycle the powder measure lever several times to stabilize the measure.

Catch the powder in a large case or catch container. Run at least a pound of powder through the unit.

⑦ **Drop a charge and verify.** Drop a charge from the measure by gently lifting lever from stop to stop. Please note: forcefully bumping against the stops when dumping and filling the metering chamber can cause inconsistent loads.

Now weigh your charge, and you'll be very close to the correct charge. Chances are that it is not exact because the volume of one grain is not precisely the same for your particular batch of powder as that which we tested. This is because the powder manufacturer can't make every batch of powder exactly the same.

Lee Safety Powder Scale

Magnetically damped and Approach-to-weight

Safety and accuracy are the most important features. Easy to read and set. Calibrated with weights traceable to the UNITED STATES BUREAU OF STANDARDS. Even if you already own a combination bullet and powder scale, you will want a Lee Safety Powder Scale. 90681

⑧ Snug Thimble

Once you've achieved your charge, snug up the thimble after setting and the "o" ring within will hold the setting with no fear of it moving while in use.