About your RCBS Model 304 Scale

The 304 is a professional, laboratory-quality scale, ideally suited to the professional reloader's needs. It offers an easy-to-set direct reading dial in values from 0.1 to 10 grains. Instead of the usual single beam, it has two tiered beams (10 to 100 grains, and 100 to 1,000 grains). Both beams have center-reading poises. The magnetic damper, plus agate bearings, provide both speed of operation and accuracy. Guaranteed sensitivity 0.1 grain. Includes platform for holding powder trickler.

This scale is manufactured exclusively for RCBS by
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Dial-O-Grain is a registered trademark of Ohaus Corporation

HOW TO CARE FOR YOUR SCALE:

Keep the Scale clean at all times, being careful not to let dirt accumulate near the bearings. Foreign matter can be most easily removed with an air syringe. From time to time it may be necessary to clean the damping magnet faces. This is best done by inserting a piece of sticky tape into the damper vane slot, and pressing it against the magnet face. The tape will pick up any foreign material that could interfere with movement of the damper vane. Never apply oil or any lubricant to the knives or bearings; it will reduce the accuracy of the Scale.
TO UNPACK AND ASSEMBLE:

NOTE: To make sure that your Model 304 Dial-O-Grain® Scale reaches you in perfect condition it has been shipped with each component packed securely in a protective polystyrene container. The Scale Beam Assembly has been raised from the bearings to prevent damage to the bearing surface.

1. Remove polystyrene container from shipping carton and place on bench — Base side up — as shown in Figure 1.

2. Cut tape that holds upper and lower halves together. Lift off upper half and remove Base containing Powder Trickler Platform.

3. Remove Scale Beam Assembly from lower container half and replace it upside down as shown in Figure 2.

4. Screw threaded Rod (A) into Hole (B) until it stops.

5. Slide Column (C), with keyed end to your right (sketch), down over threaded Rod until it rests flatly on Beam frame.

6. Grasp wide end of Scale Base in your right hand, using your thumb to hold the Powder Trickler Platform flat against Base. Turn Base upside down and slide down over threaded Rod, and into Column (C).

7. Holding Base in place, slip Plate (D) over threaded Rod, and into slotted area on bottom of Base. Tighten nut (E) securely with Wrench (F).

8. Turn assembled Scale right side up and hang Pan Support onto top notch of hook on end of Scale Beam. Place pan on pan support. Powder Trickler Platform height can be adjusted by raising the outside edge and sliding it up or down.
To zero balance scale:

Slide poise (A) on the rear beam, and poise (B) on the front beam to zero. Then set the Direct Reading Dial (C) on zero. The Beam Pointer (D) should now line up perfectly with the zero on Dial Plate (E).

If the Pointer falls below the zero, rotate Balance Compensator Knob (F) away from you until the Pointer rises and lines up with the zero. If the Pointer is above the zero, rotate Knob (F) toward you until the Pointer drops and lines up with the zero.

It is advisable to zero the scale periodically, since foreign material may accumulate on the beam or pan and cause a slight change in the Pointer's position. Whenever the scale is moved to a new location, the balance should be checked, and, if necessary, re-zeroed.

To weigh an unknown:

Determining the weight of an unknown, such as a powder charge thrown (dispensed) from a powder measure, is really quite simple and quick to do.

1. Make certain both poises, the Direct Reading Dial, and the Scale Beam Pointer are all on the zero mark.
2. Rotate the Direct Reading Dial to the 10 grain position.
3. Place the powder into the Scale Pan.
4. Move the 1,000 grain poise on the rear beam — one notch at a time — until the beam pointer falls below the zero. Then move the poise back one notch, and the pointer will rise.
5. Now move the 100 grain poise — on the front beam — one notch at a time, till the beam pointer again falls below the zero.
6. Very slowly rotate the Direct Reading Dial until the beam pointer lines up perfectly with the zero. The weight of the powder is the total of the figures shown on both poises, and the Direct Reading Dial.

How to weigh:

Suppose you want 78 grains of powder in the scale pan.

1. Zero balance your scale as instructed above.
2. Move the 100 grain poise — on the front beam — to the 70 grain reading.
3. Now, rotate the Direct Reading Dial clockwise till the numeral 8 lines up with the zero mark. You now have a 78 grain reading, and the beam pointer should be below the zero on the dial plate.
4. Very slowly add powder to the Scale Pan until the beam pointer starts to move upward. Then stop pouring!
5. Now use the Powder Trickler to trickle powder into the pan, a grain at a time, until the beam pointer lines up perfectly with the zero. You now have a 78 grain powder charge.