

# Western Instruments Inc.

Established 1965

## W-PB-4 Powder Bulb



Western's new W-PB-4 is the industries newest Dry Method Magnetic Particle Applicator in 20 years! Every Inspector has complaints about every Powder Bulb on the market, until now. Most complain that they are hard to fill, but the W-PB-4 can be filled in two ways, either by unscrewing the Screen from the Aluminium Cap (center view), or by removing the Cap from the Powder Bulb (right view). Following Western's mantra, "a specific tool, for a specific job", the W-PB-4 isn't adapted from a turkey Baster.

Considering the W-PB-4 is a new product, it deserves an expanded description. The W-PB-4 is designed and engineered for the extremes found in the inspection industry. A review of this document, by end users, is prudent to ensure these new Powder Bulbs are understood.



The picture to the right is the Powder Bulb in Operation. The inspector holds the Powder Bulb in a comfortable manner, between the thumb and opposing fingers, as illustrated. The cap and Screen, on the aluminium cap, are pointed toward the workpiece and the bulb is squeezed rapidly in short abrupt hand movements.



When the Iron Particles inside the W-PB-4 are diminished to a state where the rapid squeezing no longer produces an even distribution of particles across the surface of the workpiece, it will need to be refilled. This refilling can be done in 2 ways, with the first method illustrated to the left, shows the Screen screwed off the Aluminium Cap, and the balance of the cap is used as a funnel. After the W-PB-4 has been used and abused and the Screen can no longer be unscrewed, the operator simply removes the cap and pours the powder into the wide opening of the Engineered Silicon Rubber Bulb.



The W-PB-4 Bulb is manufactured from Silicon Rubber, so it's characteristics will not change with temperature extremes. Often, at extremely high ambient temperatures competitive Powder Bulbs become soft, limiting the dispersion of iron powder. In extremely low temperatures, competitive Powder Bulbs get hard and are easily cracked.

The least expensive Powder Bulbs are equipped with a Rubber Cap to hold a brass screen. The screens often come out of the cast receptacle, and are lost. After filling these competitive rubber Powder Bulbs, the rubber caps are very difficult to get back into the bulb, unless they are lubricated. However, the only lubrication available is saliva, and every inspector wants to take off his glove, lick his iron powder covered fingers, then lubricate the cap.

Every W-Series Dry Method MPI Kit is equipped with the W-PB-4 Powder Bulb.