

Mass Finishing For Maximum Part Brightness

We have small stainless flat stamped parts that have slight die marks and need the highest shine possible while also removing the die marks. What mass finishing machine and process can help us?

The maximum part brightness achieved today with mass finishing is the centrifugal barrel machine running a dry media impregnated with polishing compound.

This process will:

1. Produce maximum brightness
2. Remove slight die marks
3. Keep flat parts from sticking together

The dry media most commonly used is a ground corn cob, available in fine, medium, and coarse grits. The polishing/brightening compound additives will vary with the manufacturers that are producing it.



The centrifugal barrel, centrifugal disc, or spindle machines are examples of mass finishing equipment that produces the high compressive impact energy required to obtain the polish or deburring with dry media.

The centrifugal barrel running at least 120 RPM'S, at 20-60 minute process times will do the finishing required



A few process tips for dry finishing in centrifugal barrel machines:

- A pre-dry process of the parts may be required to remove the stamping oils so the light flat parts will not stick together in the finishing process
- A post-wash or dry untreated cob process will be required for the parts to clean the media oily residue left from the finishing process
- The dry cob process generates heat. An alternate batch of cob media will be required under constant production. While one batch is processing, the other batch of media is cooling
- The barrels of the centrifugal barrel machines should be filled to a level of 60-75% full by volume
- New polishing cob can run for 12-48 hours and longer in production before replenishing. Replace just 25-50% of the cob at a time.
- New polishing cob media requires 3-4 cycles for break in. The initial few processes create an excessive oily haze on the surface of the finished part.
- Heavier parts require divided compartments to eliminate part-to-part damage. Dry medias do not protect the parts like a wet media does. Heavy parts will accelerate through the dry mass and ding into each other

The centrifugal barrel with cob polishing media is an excellent choice for brightening your stainless stamped parts. A separate deburring process for small stamped parts can also be accomplished by adding cutting abrasives like silicon carbide into the cob.