

# Dinzag Arms

## Barrel Crowning Instructions

For Rifle and Shotgun updated 03-10-10



Required tools are the cutter, pilot, adapter or handle and a hex key. I recommend using a drill adapter rather than a handle. I have found you get a more consistent cut with this method. **DO NOT EXCEED 250RPM or side load the cutter, you will ruin the tool, bend the pilot, cause chatter marks on the muzzle and chew up your rifling!**

### Getting Started

Oil is applied to cutter and muzzle before any cutting is performed. It is also wise to apply oil to pilot to reduce possible friction to rifling lands. Periodically stop cutting to clean metal shavings from muzzle, bore and tool. Oil should be re-applied before cutting continues.



Left to Right - factory barrel, ready to start, after a few turns, remove shavings, ready to finish

Start cutting. Care is taken to keep light and consistent downward hand pressure centered on bore so pilot does not wobble. Cutting is performed slowly and can be stopped and resumed at will but it is important to keep cutting surfaces coated with the oil and to clean metal shavings from bore, muzzle and cutter before re-inserting pilot.

Keep shavings from getting between cutter face and muzzle. The cutter should never leave the surface of muzzle while cutting is being performed. Cutting is often stopped to clean shavings from muzzle, bore and tool and to check depth of cut.

As the cutting goes deeper into the muzzle, progress slows because more muzzle face is contacting cutter surface. The muzzle becomes very sharp where it enters the bore and rough cutting is stopped just short of maximum barrel radius. The muzzle is ready for finish cutting after several careful cutting sessions.

## Finishing Pass



The finishing cut is performed with increasingly lighter pressure as cutting progresses until almost only the weight of tool is applied to the muzzle.

While not required, finer finish can be acquired by one of the following methods:

Option A - a piece of 400+ grit sandpaper may be applied with your thumb and turned in a circular motion. I would suggest this at the minimum as it will remove any burrs and allow for easier cleaning.

Option B - a thin and even amount of 00 steel wool is placed on cutter face and used to lightly burnish any microscopic burrs off muzzle crown. Care is taken to flatten the wool against the cutter face before inserting pilot into bore and it is important not to over burnish using this method because any steel fibers accidentally allowed into bore could score rifling lands.

## Protection



Degrease the muzzle with alcohol, then apply a bluing agent to the bare metal. OXPHO-BLUE, B/C Perma Blue, B/C Presto Pen or other bluing agent should be used to protect the freshly cut muzzle.

Alternately you can plug the bore with a Q-tip and mask the barrel and carefully paint the bare metal.