

# TAKE THE BURR OUT OF DEBURRING

After milling, parts typically come off the machine and head over to the Deburring Department to remove those pesky burrs that occur during the machining process. Hand-deburring operations can be very costly, both in time and money. An operation that takes an hour off-line can be reduced to minutes by deburring a part in the machine with high precision CNC Burs. Traditional cylindrical burs typically have a diameter-tolerance window of +/- .008 versus a CNC deburring end mill which has a diameter tolerance of +/- .0005. The tighter tolerance design eliminates the location issues found in traditional burs with loose tolerances, allowing them to be programmed like a traditional end mill. Deburring in the machine is highly repeatable, reduces overall cycle time and allows for more productive and efficient finishing of the part. With this in mind, Harvey Tool has CNC burs for any application.

## CNC Burs versus Traditional Burs

### CNC burs are far superior to traditional burs:

- CNC burs are high-precision burs that allow the use of CNC programming and tool paths
  - › Diameter and angle tolerances are held to tight tolerances
  - › Traditional burs have large diameter tolerance windows
- CNC Burs have a double-cut pattern and a high number of flutes
  - › This results in a better finish and increased speeds and feeds

### Using your CNC machine for deburring will:

- Increase efficiency
  - › Complete parts in one machining operation
  - › Avoid involving multiple departments
- Reduce labor and overall production costs
  - › Shorten cycle times
  - › Reduce scrap rates
- Improve quality with tighter tolerances
  - › Consistent and controlled edge breaks
  - › Better finish
- Increase profitability

### Choosing the right CNC bur:

- Deburring End Mill
  - › Down to .015" diameter and are perfect for small diameter deburring
- Deburring Chamfer Cutter
  - › Available with a 30° or 45° chamfer angle that can remove a burr and/or add a small controlled edge break with superior finish
- 270° Deburring Undercut
  - › Deburr complex shapes with a 270° spherical ball that easily contour to any surface
- Back Deburring Mills
  - › Ideal for deburring on the backside of small holes and tight pockets

## Additional Deburring Solutions

Harvey Tool offers an extensive variety of deburring solutions as fully stocked standard tools. There are often limitations to hand-deburring associated with the part. In these instances, deburring in the machine is a preferred solution. In addition to the industry's first CNC Bur, Harvey Tool has a variety of solutions for awkward-part orientation, deep cavities, overhangs, undercuts, narrow slots, cross-holes or delicate parts where hand deburring can harm the parts. Taking one extra pass with a very light depth of cut, also known as a "spring pass", can significantly reduce off-line operations and increase manufacturing efficiency.