



# Low Volume Stampings: When Tooling Costs Cant Be Justified

What do you do when your parts volumes are not high enough to justify production tooling?

These are several options available for lower volume stampings. A good place to start would be determining the intent of your stampings and discussing viable options with a skilled team.

Some things to think about beforehand would be:

- Do parts need to be die struck?
- Do you have surface finish requirements?
- Is the material capable of being processed using a method other than stamping?
- What raw form is your material available in?
- Are your tolerances open enough to allow other manufacturing methods to be used?

With that information in mind, here are some alternative options to consider:



Laser cutting is possibly the quickest and lowest cost alternative. With the speeds of laser cutting and the ability to change & adjust programs in just minutes, laser cutting is a great alternative for samples, prototypes or low volume production runs. A disadvantage of this method could be material utilization as it is often times better to nest parts in a coil strip rather than a sheet of material. Tolerance limitations could also be a factor. See our guide to laser cutting tolerances.



Water Jet cuts material using high pressure water that erodes the material. It is similar to laser cutting in that sheet material is utilized and program changes are easily made. Quite often, laser cutting will be faster and may yield better surface finishes, but one advantage of Water Jet is the lack of heat generated in the material. This can eliminate thermal growth and material structure changes that laser cutting may introduce.



CNC punching is another quick and low-cost alternative that allows for easy program changes. Because this method utilizes stamping it closely resembles a die struck part. Tolerances can be held almost as tight as in a production stamping tool. Material utilization is often less efficient than in a stamping tool due to the fact that you leave a scrap nest behind to hold the parts during manufacture.



Wire EDM. Quite often a stack of material can be wire cut, producing multiple parts in one setup. While this method is capable of holding tight tolerances and great surface finishes, it can also be one of the more expensive methods. Geometry changes are easily made. Wire EDM is a good choice for complex shapes and contours. [See our introduction to WEDM info.](#)



CNC machining is another option although probably one of the more expensive methods available due to it being one of the slower ways to process sheet metal parts.



Prototype tooling often uses any means necessary to produce parts. You may start off with a laser or Wire EDM cut blank and finish other operations using some temporary tooling. Often times prototype tools may use a master die set and swap out components as necessary to produce low volume stamping parts.



Soft tooling is similar to prototype tooling in that it can use multiple combinations of processes to produce the final product. Soft tooling typically is for low to medium volume runs and is not expected to run production volumes. Soft tooling may also share a master die set and can closely mimic the processes used in a production stamping tool.



Single hit or hand transfer tooling is another option for low volume metal stamping. Rather than building a full progressive stamping die, the stations of the tool could be mounted in a more temporary state and the parts moved along through the different stations by hand. Flat blank development can be made using many different methods as mentioned above.

As you can see, there are many options available for your low volume metal stampings. Start with a skilled partner that has multiple options available. While metal has its physical limitations of what can be done to it, your methods of getting there are only limited by the skill, creativity and equipment available at your supporting vendor.

Wisconsin Metal Parts can take you all the way from prototype through production. Our experienced staff can help you find the most cost-effective way to produce your low volume metal stampings. We will help you spend your money wisely. Contact us today to discuss your next project.

At Wisconsin Metal Parts we welcome challenges! 🇺🇸