



## What are the main drivers of costs for fabricated parts?

WMPI can help you identify ways to minimize costs of fabrication. We see 3 main areas that drive fabrication costs:

### 1. Tolerances: Set Them for Part Function

Does your design software auto-populate your part print with 3 or 4 place decimals? Your part print is our guide, and our estimators will seek appropriate manufacturing methods to meet your specifications. If your drawings have tolerances tighter than actually needed, you may pay more due to added manufacturing processes.

Once WMPI accepts your PO and your drawings are released to our shop floor, our team is committed to meet those tolerances and record that data with their initials on inspection forms. We take tolerances and inspection seriously. You know your parts and their function best, and by discussing their function with us early, you can minimize cost and get the best results.

### 2. Material Selection Strategies

Fabrication material costs can often range from 40% to 80% of a total job cost. Choosing a commercially available material will yield the best pricing. Hard-to-find gages and material types tend to be more expensive. Volume is king! Working with a supplier that has buying power will also benefit your overall material costs. Adding finishes or vinyl protective sheets to prevent scratching adds to material costs. Our best pricing often comes when a customer has the buying power to negotiate pricing with a material supplier and allows us to buy at their discounted pricing.

### 3. Clean CAD Data

When WMPI receives clean CAD or model data, jobs typically run very smoothly through our equipment. All of our modern equipment is CNC-controlled and requires CAD data for programming. Native SolidWorks or .STEP files work best when parts are drawn with the sheet metal package. Then we can simply verify the bend radii and unfold the parts to make our flat blank. In addition to CAD data, we need a part print that shows your critical dimensions and tolerances. If any of this information is incorrect or missing, your project can grind to a halt as we chase down the data. As our quotes state, we assume this information is available and will be provided at the time of PO.

## Other Cost Drivers

### 4. Volume vs. Setup Costs

Simply said, lower volumes cost more per piece because there are fewer parts to share setup costs. Each machine has some setup involved. Laser cutters need a program loaded, raw sheet material loaded and first piece inspection performed to ensure conforming parts will be made. For the punching machine, we need to load a program, tooling and material, and it requires first piece inspection. Our CNC-controlled brake presses require similar setup and inspection. Even welding requires preparing the workspace for a specific job to run efficiently in a job shop environment.

### 5. Inspection

Your inspection requirements can affect your pricing. At minimum, we inspect everything we make at WMPI before it's shipped. Some customers require additional inspection criteria such as First Article reports, 100% inspection, PPAP or others. WMPI has the capabilities to do all of these inspection processes at our facility, with varying costs associated with each process. If we can simulate your assembly process with functional gages, we can assure your parts will fit as intended and possibly keep inspection costs down.

## **6. Packaging**

Depending on the project, packaging can be costly to ensure parts are adequately protected during shipping. Returnable packaging can often help save cost if available. We may also find efficiency savings by considering the part's next processes. WMPI has a variety of ways to meet your requirements. Let's talk.

## **7. Budget**

If you can share your budget with us, we can often select the manufacturing processes, tolerances and/or volumes needed to achieve your budget parameters. If we can find a way to beat your budget numbers, we will share that with you as well. We add value for our customers by offering any cost savings ideas we can identify before, during and after production runs. WMPI is here to serve you and help you spend your money wisely.

Wisconsin Metal Parts Inc