

8 Tips for Maximizing Returns in Tooling

Why Tooling Matters

Tooling is an asset to your company. Proper tooling ensures that your supplier can reliably fabricate parts to specification. An unreliable tool impedes production and requires extra expense to maintain and repair.

Ways to Reduce Tooling Cost

Here are a few tips for maximizing your tooling returns.

1. Do not confuse price with quality

Even an inexpensive tool must perform properly. A well-made tool will be able to create high quality parts at your required rate of production for its entire lifetime. A high quality tool will also require minimal maintenance, which cuts down on cost.

2. Balance your tolerances

Before you even consider tool design, scrutinize your part tolerance vs. your performance tolerances. Up-front analysis here helps you avoid the expense of over- or under-tolerancing your tool.

3. Insist on computer simulations of your tool

The tool you design is going to be unique to your project. Choose a designer who can optimize performance by simulating how the tool will operate during use. Mold flow, thermal convection, and stress are all factors that affect the molding process. Don't settle for a designer who guesses.

4. Remember that measurement matters

Choose a tooling fabricator that has at least as much skill in metrology as they do in manufacturing. It is possible to diamond turn a tool that is exactly wrong.

5. Choose a strategic partner, not just a supplier

The quality of your part depends just as much on the supplier as it does on the tool. Choose a supplier that has the resources and expertise to help you refine tooling and processing to create the best quality part.

6. Communicate from tool design through application

Collaboration among your designer, fabricator, and supplier is key. Clear communication helps to ensure that your tool is optimally designed and fabricated to operate in its particular manufacturing environment. At the very least, make sure that your designers, fabricators, and suppliers are using compatible software!

7. Monitor progress

Work with your contractors in advance to set up a reasonable schedule with clear expectations. Communicate regularly to ensure mutual understanding of project progress.

8. Document everything

Failure happens. Plan for it. Maintain copies of CAD files, simulations, test results, etc. Inevitably you will have to "go back the drawing board." Don't erase the drawing board.

Troubleshoot Your Tooling

Empire has effectively transferred more than 1,500 tools, and we can help with yours.

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Tooling Tradeoffs

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