6 TIPS TO DECREASE PRODUCTION LEAD TIME

BY KATIE FROM FAB MASTERS COMPANY, INC - MARCH 2017

Decreasing production lead time is a common and practical aim in manufacturing. While it is impossible to eradicate all potential issues that can cause unwelcome delays in your project, a number of these situations are preventable, of which the original equipment manufacturer (OEM) has control.

As a fabricator of custom aluminum extruded parts, Fab Masters Company, Inc. strives to maximize efficiency in the manufacturing processes of our customers. Our 30+ years of experience as a contract manufacturing partner has helped us recognize areas that can often use streamlining.

Reduce Design Complexity

Simplifying a product's structure can lessen the required number of operations to fabricate and assemble its parts. Investigate whether any manufacturing processes can be integrated.

In addition, reducing the number of overall parts, if possible, can save time as well as reduce the opportunity for defects and errors. A minimalist design can be aesthetically attractive and efficient to manufacture.

Similarly, streamlining a product's functions and features can curtail extraneous processing efforts and cut back on or eliminate more complex tooling.

Proofread Your Prints

Your prints speak for your parts. With this in mind, prints should convey clear and complete information. Ensure prints have correct dimensions, acceptable tolerances, any specified materials, and proper units of measure. Incorporate 3D models and weld callouts when appropriate. Prints featuring comprehensive information can minimize time spent inquiring about these details during the quoting process.

It is also helpful to include contact information on the print so that if a manufacturer does have a question, they can immediately reach someone who can answer it.

Consider Manufacturability at Every Step

Manufacturability is the ease and proficiency with which a part can be built. Assessing the feasibility of manufacturing a product at every step in the design cycle can help prevent and eliminate potential issues in production. Aspects to consider are the accessibility of the product's components, the cost of complex custom tooling or re-tooling, the compatibility of production processes, and the ease with which your part can be manufactured to print. Lack of information, communication, and integration between design and manufacturing will all increase production lead time.

Build Verifiability into Assembly

If possible, design components so their assembly is possible in only one way and irreversible. Using notches, asymmetrical holes and stops can be used to integrate checks into and mistake-proof the assembly process. Assimilating these opportunities for verifiability into assembly can prevent errors that would require time-consuming rework or costly scrap.

Create a Comprehensive Timeline

Reasonable estimations and a detailed timeline can help keep your expectations accurate. For instance, your timeline should account for any custom extrusion die or tooling production. Solid shapes or bars need roughly a week of additional lead time. Depending on the complexity of the extrusion, it can take up to six weeks to make a custom die. Being surprised with a six-week delay can be frustrating, to say the least. Knowing what to expect can help you set practical deadlines.

Consult a Contract Manufacturer

Working closely with a turnkey or contract manufacturing partner that supports project design, process development, and validation of manufacturability is invaluable. A knowledgeable fabricator can speed up the design cycle by providing critical insight during the design and quoting processes. Not only does an experienced contract manufacturer have the potential to reduce the time and money spent on design revisions, they can help you prevent potential mistakes throughout the production process by offering their expertise beforehand.

As specialists in fabricating aluminum extrusions, Fab Masters Company helps entrepreneurs and businesses turn their prints to parts by providing an array of pre-production and metal fabrication services.

ABOUT US

Fab Masters Company, Inc. is a comprehensive fabricator of aluminum extruded parts. With a wide array of precision machining tools and expert machinists, Fab Masters is proud to be one of the largest production weld shops in Southwest Michigan. Our goal as your manufacturing partner is to make your job easier by designing, constructing, and assembling the aluminum parts you need. We provide complete turnkey development from conception to completion, including 3D prototyping, custom CNC fabrication, supply chain management, and light assembly and packaging. For more information on how you can best put our 30+ years of experience to work for you, see our website: **http://www.fabmasters.net/** .