THE METAL FABRICATION SUBCONTRACTING

DECISION GUIDE

Everything You Need to Know About Working with a Metal Fabrication Partner

INTRODUCTION

This guide is designed to help you choose metal fabrication services and a subcontracting partner that supports your goals. In this guide, we'll discuss important aspects to look for in a metal fabrication partner, advantages of subcontracting metal fabrication work, and what to expect.

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What to Look for in a Metal Fabrication Partner

Choosing the right metal fabrication partner is essential to complete your project on-time, on-budget and with the highest level of quality. Depending on the work that you are looking for, you may find many options available. As you compare fabricators, consider the following:

One-Stop Shop

A one-stop shop will give you access to the tools and machines that you need now, and will give you room to fulfill more orders in the future. This type of shop will grow with you and continue to fulfill your needs. With the right technology and experience in one place, you don't have to work with numerous subcontractors.

Look for a shop that gives you access to the following fabrication processes:

- Laser cutting
- Waterjet cutting
- Custom welding
- Robot welding
- Forming
- Flighting and augers
- Rolling
- CNC machining
- Powder coating

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Experience

Finding an experienced metal fabrication partner includes two aspects: experience with the processes that you need, and experience in your industry. This ensures that the work that you receive will be high-quality, and that the needs of your industry are met.

Specific process experience:

Ask about your subcontractor's experience with the specific job that you're looking for, such as robot welding or CNC machining. How long as the subcontractor produced this type of work? What type of experience do their machinists have?

Industry experience:

It's helpful for your subcontractor to bring industry experience to the table, otherwise important codes, regulations or requirements may be overlooked. For example, food manufacturing equipment and chemical processing equipment have very different codes, regulations and requirements, and a lack of knowledge can affect the overall product.

Facility Size

The size of the facility is also an important consideration, especially if you are working with large or high-volume projects. This includes the facility itself, but also the maximum dimensions that a given machine can handle. Consider the following questions for your subcontractors:

- Is the manufacturing facility equipped to handle the production volume you require?
- Are the manufacturing machines equipped to handle the dimensions of your project?
- Is the staff size realistic for your product needs and projected timeline?

References

Positive references from previous clients can help to show a facility's best skills, performance, and whether or not they are a reliable, trustworthy subcontractor.

Case studies:

These will help to illustrate a subcontractor's previous work, and can show you what to expect. This might also show what types of industries they have experience in. Case studies can provide an easy way to learn more about a subcontractor without having to take time out of your day to contact a previous customer.

Online reviews:

Online reviews are an even faster shortcut for assessing the subcontractor's performance. Though these types of reviews are much shorter and may not provide great detail, they can tell you about general factors, like a subcontractor's timeliness or ability to correct issues or problems.

Previous clients:

Contacting previous clients takes more time, but will give you more information. Ask the subcontractor about who you can contact to learn about their process and deliverables. In particular, look for a previous client who is in your industry, or utilized similar processes.

How Can Your Metal Fabrication Partner Help You?

It can be tempting to try and take on every project by yourself, but this isn't always realistic. When you want to improve your turnaround time, simplify complex processes, or take on jobs that you don't yet have the equipment or experience for, a subcontractor can help.

Faster Turnaround

There are many ways that the right subcontractor can help you meet quick turnaround times. If you're not sure about your client's projected schedule, consider how you could shorten this timeline. A fabrication partner can help you:

- Produce more units
- Take on a single, complex or time-consuming aspect of a project
- Improve the design to improve fabrication speed
- Supplement your existing staff and machines

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Filling Knowledge Gaps

Finding experienced staff is a common concern when it comes to scaling your operations. Manufacturing is experiencing an ongoing skills and knowledge gap that is, unfortunately, expected to worsen with time. Subcontracting gives you a chance to fill these knowledge gaps in many ways, including:

- Working with experienced engineers or designers
- Utilizing the skills of experienced welders and machinists
- Leveraging supplier relationships that your subcontractor may already have

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Improving Designs

In some cases, making a simple change to a design or a manufacturing process can significantly improve the overall product. This can help you reduce costs, reduce production times, or improve the product quality. An experienced engineer can help you:

- Remove extraneous processes to simplify and streamline the fabrication process
- Make small changes to simplify the product design and significantly lower costs
- Provide insight about materials to choose the most cost-effective and high-quality material for the job

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Filling Equipment Gaps

It may not always be feasible or desirable to invest in new machines at your shop. Working with a subcontractor gives you flexibility, without overextending your resources.

- Take on complex fabrication jobs quickly
- Take on larger orders by supporting your existing machines
- Take on projects with larger dimensions

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When to Work With a Metal Fabrication Partner

It can be difficult to determine when you need a metal fabrication partner, or whether or not your project is suitable for subcontracting. Here are a few things that can help.

Quantity Minimums and Margins

Different processes have different minimum set-up fees and rates, and it's important to ensure that your project makes financial sense with these rates.To calculate whether this rate makes sense, here is a general calculation using your desired profit margin per unit. There are many other equations that may also work for you, depending on the information you have available.

- Desired profit margin per unit = (sale price/unit - cost/unit)
- Cost/unit = [materials cost + your manufacturing costs] + subcontracting costs
- Subcontracting costs = [subcontracting hourly rate x hours total] + setup fees
- Setup fees = fixed subcontracting costs / total subcontracted units manufactured

Desired Margin = sale price/unit - (materials cost + your manufacturing costs + [subcontracting hourly rate x hours total] + [fixed subcontracting costs / total subcontracted units manufactured])

Keep in mind that fixed subcontracting costs may include elements of machine set-up, as well as design and engineering costs of the first run. However, the per-unit costs of these expenses will get smaller as the number of units increases.

To learn more about APEC's subcontracting fees by process, ***download the Custom Fabrication Spec Sheet ›***

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Applications and Processes

Some applications are better suited for subcontracting than others, and different subcontractors have different types of experience, machines, and applications. Consider the type of welding, machining, forming and other processes you are looking for. Here are a few examples of our custom fabrication work that can help you decide where your project might fit in.

Note that this list is not exhaustive, and is merely intended as a point of reference. To see if your processes are suitable for subcontracting, **get in touch with an engineer.**

- Cutting and forming thousands of cage brackets for a large poultry operation.
- Custom augers for a food processing operation.
- Cutting of precision parts used in jet engines.
- Cutting of precision parts used in the automotive industry.
- Repair and refurbishing of farming implements.
- Design and welding custom barroom items like stainless steel counters and beer tap housings.
- Powder coating all prefabricated handrails for a large construction company.

Your Needs and Goals

Though it can be helpful to calculate your subcontracting project using a strict cost analysis, this is generally not the only element to consider. Or, your cost analysis may be more complicated than it first appears. As you consider the costs and benefits of subcontracting, consider the following as well:

- Can subcontracting help you meet deadlines on a valuable project? If you can meet this client's deadlines, what will the lifetime value of their business be?
- Will a manufacturing partner help you increase production? You may reduce margins on a subset of your products, but overall realize higher revenues through increased production.
- Can you maintain your organizational size and scope? If you're not ready to hire a new employee or if a new machine won't be frequently used, subcontracting can help expand your operations temporarily until you're ready to scale up permanently.
- Will additional design and engineering experience make your manufacturing operations more efficient and cost-effective overall?

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CASE STUDY: ARCHITECTURAL METALS INC

"For years we have called on APEC for their laser and water jet services, unique steel fabrication and powder coating capabilities, and always receive a high-quality product.

APEC's customer service, competitive pricing and attention to detail are second-to-none, and make our continued business relationship an easy choice. We highly recommend APEC."

Chris Duits
Sales and Business Development
Architectural Metals Inc

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WORK WITH AN EXPERIENCED, RELIABLE METAL FABRICATION PARTNER

APEC offers laser cutting, waterjet cutting, custom welding and fabrication, flighting and augers, robot welding, forming, rolling, machining, and powder coating.

If you are looking for an experienced custom metal fabrication partner, we can help.

Request a Quote

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