

Precision Metal Stamping – How to Find a Qualified Supplier (Ten Factors to Consider)

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When selecting a supplier for stamped metal components with tight tolerances and critical features, there are some important factors that you should consider. Although important, unit cost should not be the *sole* deciding factor as explained below. Making a purchasing decision only based on *quoted cost* may result in overall dissatisfaction with a supplier's performance, or even in a disastrous situation. The following ten factors should be taken into account when selecting a precision metal stamping supplier: (1) years of experience, (2) ability to *design* precision metal stamping dies, (3) ability to *build and troubleshoot* precision metal stamping dies, (4) process control, (5) a die maintenance program, (6) delivery time frame, (7) running speed, (8) spare tooling, (9) "attention to detail", and (10) the ability to perform secondary operations (such as plating, cleaning, etc.).

First and foremost, it is essential to select a precision metal stamping supplier who has significant experience. Make sure that you take the time to understand how long a supplier has been in business, and to become familiar with the types of components that they have stamped in the past. It is important to know if a supplier's expertise is in flat parts, formed parts, or both. Take the time to learn about the supplier's experience in working with difficult, intricate parts, their ability to hold tight tolerances, and their ability to achieve complex bends (on formed parts).

The second and third factors to consider are whether the supplier has experience in *designing*, and *building* precision metal stamping dies. A supplier who can design and build precision metal stamping dies will inevitably be much more qualified to succeed in stamping your components than a supplier without these capabilities. A supplier who designs precision metal stamping dies understands the importance of having certain features and stations in a die which will result in the highest efficiency and quality during the stamping operation. A supplier who is adept at building and developing precision metal stamping dies has the added benefit of being able to troubleshoot any unplanned stamping issues.

The fourth factor to consider when selecting a precision metal stamping supplier is the supplier's capability in the area of process control. If a supplier is ISO-certified, this provides a certain layer of insurance that control processes are in place. Understanding how a precision metal stamping supplier creates and works with control plans is important. Visiting the supplier and seeing their Quality system in operation is probably the best way to evaluate a supplier's attention to process control. Determining the role of the Quality technician at a supplier will speak volumes to assuring that a job will end up successful. Evaluating a supplier's investment in inspection equipment is an additional indicator of potential success.

Next, it is beneficial to determine if a precision metal stamping supplier offers a die maintenance program. This will result in maximizing the life of the die and will optimize your total life cycle cost for your stamped component. A good die maintenance program will address die and die component inspection, synchronization and adjustment of die/press/peripheral equipment, proper assembly/disassembly techniques, die component replacement schedules, etc.

Sixth, a precision metal stamping supplier's delivery track record will reveal whether or not a supplier has the proper systems in place to not only *quote* a good delivery time frame, but actually to *deliver on-time*. If a precision metal stamping supplier is not officially tracking their on-time delivery performance, then it is better to select another supplier.

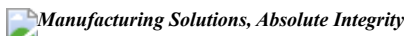
The precision metal stamping supplier's ability to achieve certain running speeds is the seventh factor that should be considered. An experienced supplier will be able to run at faster speeds (while maintaining quality), and consequently provide the most optimized pricing.

The eighth factor to consider is spare tooling. Often overlooked, a discussion of a spare tooling list is critical to a precision metal stamping job. A good supplier will suggest discussing spare tooling up front in order to maximize the likelihood of success for a stamping campaign. Make sure that this cost is taken into account when judging one quote against another. Require all bidders to address spare tooling. If a precision metal stamping supplier has the added capability of being able to *manufacture* its own spare tooling, this is an obvious benefit.

Next, it is important to determine if a precision metal stamping supplier is one that will pay close attention to the "fine details" of a job. In addition to looking at the quality of a supplier's previous sample parts, try to determine if a supplier is concerned about fine details by noticing their behavior early in the quoting process. A supplier who asks a lot of questions pertaining to part quality, key features, and tolerances is typically one who will likely over-deliver in the area of "attention to detail".

Lastly, a precision metal stamping supplier who has the added capability of performing *secondary operations* is invaluable in area of overall supply chain logistics. A supplier that can perform any of the following additional operations will typically result in significant savings for your company: cleaning, electroplating, packaging, product assembly, custom automation (in conjunction with the stamping operation), and machine vision inspection.

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