Special Stamping Issue

Ajax Innovator

News & Insight From Ajax Metal Forming Solutions

Pressed For Capacity?

Learn how Ajax takes over stamping tools with great results.

Leader's Message

From Kent Djubek, Ajax President

Winning With Culture

When things began to slow down in May and June, I never for one second thought the situation would be permanent. It seemed more like a window of opportunity.

My colleagues and I seized the moment. We made improvements around the plant. We painted our buildings inside and out. We performed maintenance on machinery and equipment.

Then, when July rolled around and things started to get busier, we were able to hit the ground running, and we haven't slowed down.

Recent economic indicators may help explain our surge in business activity. The ISM Purchasing Managers' Index for both July and August was up a few ticks.

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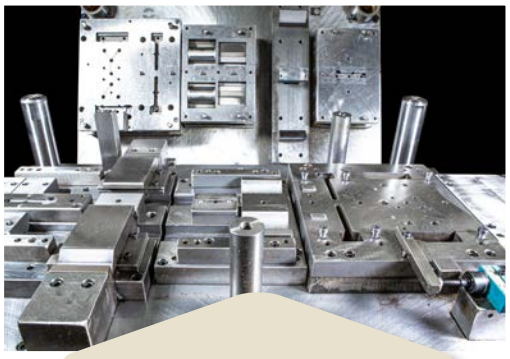
There's a right way and wrong way to take over a die set. Here's the checklist Ajax uses to ensure a smooth transition.

Anyone who oversees a metal stamping operation has a full plate. Expensive machinery, maintenance, material management, quality conformance, and workforce hiring and training are just a few of the issues the stamping production manager must confront, pretty much on a daily basis.



Transferring stamping tools to a new supplier is not a task to be taken lightly.

Now throw in a heavy dose of economic turmoil. Unforeseen product demand surges can goof things up quickly. Today's successful production managers must have a knack for aligning their production plans with new realities. If current production capacity struggles to meet product demand, another stamping facility may need to be found, and fast.

And the die set? Off it goes to be installed in some other stamping press.

But designing, producing, and maintaining stamping tools has never been inexpensive. Complex stamping tools can easily run to $50,000 or more and take weeks to complete. Moreover, a die set can break if installed improperly or operated carelessly, resulting in unexpected costs and delays. Clearly, handing over tooling to a new production location is not a task to be taken lightly.

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Case In Point
A Progressive Die Takover

Here's how Ajax took over a progressive die set from another manufacturer and delivered parts on time and on spec while shortening the supply chain.

An Ajax customer had outsourced the production of a grounding bracket to a Chinese manufacturer. The Chinese manufacturer was not able to produce the part to print. They blamed the tool.

The customer called on Ajax to re-tool the die set and get the bracket back into production on an Ajax press. The material, beryllium copper, combines high strength with non-magnetic and non-sparking qualities, ideal for electrical grounding.

The part was small, so Ajax designed a vacuum-based handling system to remove the stamped part from the die set. An additional requirement was that the part retain its "spring" in order to ground the part with the enclosure reliably. The Ajax solution was to heat-treat and plate the part, which increased strength and durability. Ajax used local providers for the treatment.

The Ajax customer was delighted with the outcome. They got the very high part quality they sought along with perfect tolerances consistently throughout the production run. In the bargain, the customer saved costs and shortened their supply chain considerably by avoiding transcontinental shipping.

Ajax re-tooled this die set and got the grounding bracket back into production quickly.

Pressed For Capacity (cont.)

If you find yourself seeking new stamping capacity, and you have a tool to hand over, look for these attributes in the supplier you select.

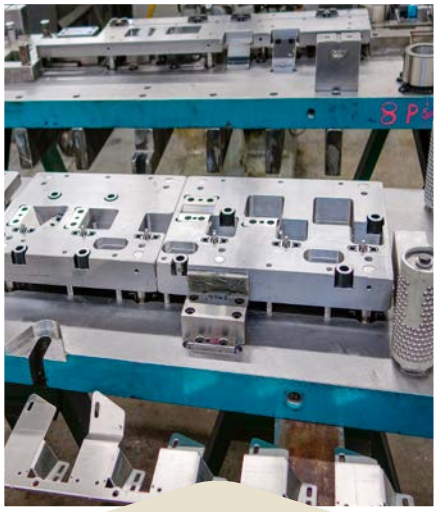
Machinery That Matches or Exceeds Specs

Will the machinery available from your new supplier do the job? Will your supplier provide you with a listing of their capacities? Here are the critical specs to check:

1. Bolster and ram size – Is the bolster or ram large enough to handle your asset?

2. Tonnage – If your material of choice is a high tensile steel, make sure the tonnage capacity of your supplier's presses are up to the task.

3. Feedline – The feedline plays a crucial role in efficiency and part conformance. Can the supplier's feedline deliver the material precisely, without misalignment? Does your supplier have a feedline system that can handle coils that are wide enough for your tooling? These are good questions to ask up front.



In-house tooling capabilities are essential for a successful takover die process.

4. Stroke – Does your supplier have a variety of presses with varying stroke travel? Most tools require a minimum clearance for parts to move through the tool.

5. Shut height of tool – The shut height of the tool is the total height of the die set when the tool is in the fully closed position. Your supplier should know what height each of their presses can accommodate.

Capacity

This is a very important measure because it relates to customer service. Most stamping providers can handle higher capacities. Otherwise, they wouldn't be in business for very long. But if you're not considered to be an important customer by a provider, you'll likely wait in line.

So the smart buyer needs to strike a balance: choose a supplier that's too large and the responsiveness might be lacking. Choose one that's too small, and the available machinery and workforce won't be able to handle the load.

Look for these keys to determine whether or not a stamping provider is a good fit for your needs:

a. Are you assigned an experienced manager to handle your account? Or will you work with different project people depending on when you call? A dedicated account manager can make a huge difference in the quality of service you receive.

b. Can the provider onboard your asset and get your project rolling in a reasonable amount of time? A quality stamping provider is always going to be busy because their customers keep coming back.

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Pressed For Capacity (cont.)

But an unreasonably long turnaround indicates that you aren't an important customer. Look for a supplier that is willing to create a schedule that accommodates your needs.

c. Ask about aspects of your supplier's business that may seem less important when you're anxious to get your parts produced. Logistics is always a good place to start. Is the supplier capable of Kanban principles? Are there workcell options for multiple tools?

Another area to ask about is workforce development. Are significant workforce investments being made?

Also, it's easy to overlook safety as a measure of good management. A good safety record helps to retain top talent, keeps costs down, and avoids work stoppage. A tip: find out if the provider does third-party safety audits. If they do, you'll know they take safety seriously.

In-house Tooling

Inheriting a worn-out, beat-up tool is not uncommon in a takeover die situation. That won't present a problem for an experienced in-house tooling crew. Moreover, any requested changes in tool design can be accommodated with minimal additional time and expense.

Many providers use third-party tooling houses to produce and maintain die sets. While there are some excellent third-party tooling operations out there, you'll likely need to get in line. That can mean days or even weeks.

And, since third-party tooling companies are in business to make money, you'll end up paying that profit margin. A great way to shave significant time and cost from your quote is to choose a provider with an in-house tooling department that's ready to take over your die set.

Additionally, having experienced tool and die people on hand provides assurance that your asset will be maintained as needed. Having tooling pros on-site to oversee the line startup can help get your project off to a problem-free start.

It's always a good idea to pick a supplier with a fully-functional in-house tool and die department and skip the extra time and money expense — and related headaches.

An excellent supplier won't flinch when you ask any of these questions. In fact, here at Ajax, we look forward to this discussion. We've made large investments in all these areas, and we're happy to be very transparent about all aspects of our stamping operation.

Interested in a tour of the Ajax plant? Call our Sales Engineering team at **763-277-7760** to make arrangements today.

Ajax Again Earns Top 150 Workplace Honors

"There are plenty of well-run companies here in Minnesota that are really good places to work. Our Top 150 Workplaces recognition places us among them," said Ajax President Kent Djubek.

Ajax has been recognized as a Top Workplaces company in each of the past six years.

Ajax Produces Prototype Aluminum Enclosures For Bakken Ventilator Project

When it comes to COVID-19 illness, ventilators can save lives, but there's too few to go around.

So when the U.S. Food and Drug Administration issued an emergency use authorization (EUA) for the "Coventor" ventilator prototype developed by the Bakken Medical Devices Center (BMDC) at the University of Minnesota, Ajax colleagues went to work and produced about 3,100 aluminum enclosures for the Coventor in just a few days.

With the Ajax enclosure, this machine can be assembled quickly using internal parts that are relatively easy to find.

"What's unique about our design is that it's a low-cost, mass-production unit that gets the job done. It's designed for emergency use. We can send our design all over the world, and it can be reproduced," said Cara Piazza, a project team member at BMDC.

Our thanks go out to all our Ajax colleagues who put in some long hours to produce and deliver prototype enclosures for this life-saving machine.

Ajax provided programming, materials, and labor for this enclosure prototype within a very tight time frame.

A Custom Fin Plate Specialty

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Custom heat exchanger fins require perfect extrusions and efficient production.

Custom heat exchanger fins often require a thickness that some presses can't handle, extrusions that are hard to punch, or smaller quantities that don't make sense for a coil run. And they need to be perfect.

Ajax has decades of experience building custom fins, header plates, and other components for commercial and industrial heat exchangers. These are parts that demand tight tolerances, advanced production machinery, superior tooling capabilities, and CAD/CAM programming to optimize efficiency.

Some presses may not be well suited for customized part production or limited quantities. Ajax has production machinery and processes that enable us to produce custom fins from stainless, copper, and aluminum to virtually any specification. Ajax can do short-run, quick turnaround projects as well as high-volume, high-efficiency production runs.

The Ajax in-house tooling department is fully capable, fully trained, and ready to get your parts into production. Our pros can make almost any size extrusion to fit perfectly with your tube expansion process and equipment, whether it is a hydraulic expansion or mechanical expansion.

Ajax uses PC-based applications like SolidWorks®, RADAN, and others to compress timelines, improve part quality, and improve production efficiency. These apps are especially useful for nesting custom parts like fin plates and also for programming extrusions.

When you contact Ajax to assist with your fin plate production, you'll be dealing with a team that really understands thermal technologies. That's just another reason why some of the world's largest HVACR companies choose Ajax.

Custom heat exchanger fins often require a thickness that some presses can't handle, or extrusions that are difficult to punch. Ajax has carved a niche in this important market.

Leader's Message (cont.)

A survey of my fellow Precision Metalforming Association members revealed that only a small percentage expect further decline. The Dow had it's best August in 36 years. Companies are hiring. Hopefully, this positive news will flow into the 4th quarter and OEMs will continue to dial up production.

Focusing on the positive and keeping things upbeat during this difficult year has been a priority for us. Why? Because negativity is a drag on performance. Technically speaking, it suppresses the prefrontal cortex, which is critical for creativity, decision-making, and envisioning solutions. Researchers have proven this to be a real experience .

Ajax President Kent Djubek

By contrast, a positive workplace culture tends to create more favorable outcomes. Good outcomes generate momentum and confidence. Winners expect to win.

When Ajax delivers quality parts to a happy customer right on time, that's a win. When we provide above-and-beyond customer service, that's a win. When we wrestle with a production problem and find a workable solution as a team, that's a win. When we persevere through a dip in the business cycle, as we've done so far, that's a huge win.

We have a slogan on our plant and office doors: "Winning with Culture." My colleagues here at Ajax see that message every day when they come to work. I want them to embrace it. When I lead company-wide situation updates, I make sure to weave positivity into my talks. Because as they say: motivation is like bathing — it loses effectiveness over time.

I'm now in my 30th year here at Ajax. My experienced colleagues and I have seen our share of economic ups and downs. I'm happy to say we have plenty of reasons to be optimistic. Ajax picked up another Top 150 Workplace designation. We're keeping our buildings clean and safe. We've got a great team of professional metal formers. And we're making bold plans for the future.

I'm convinced that the winning culture we've nurtured will carry Ajax through this difficult year in great shape.

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