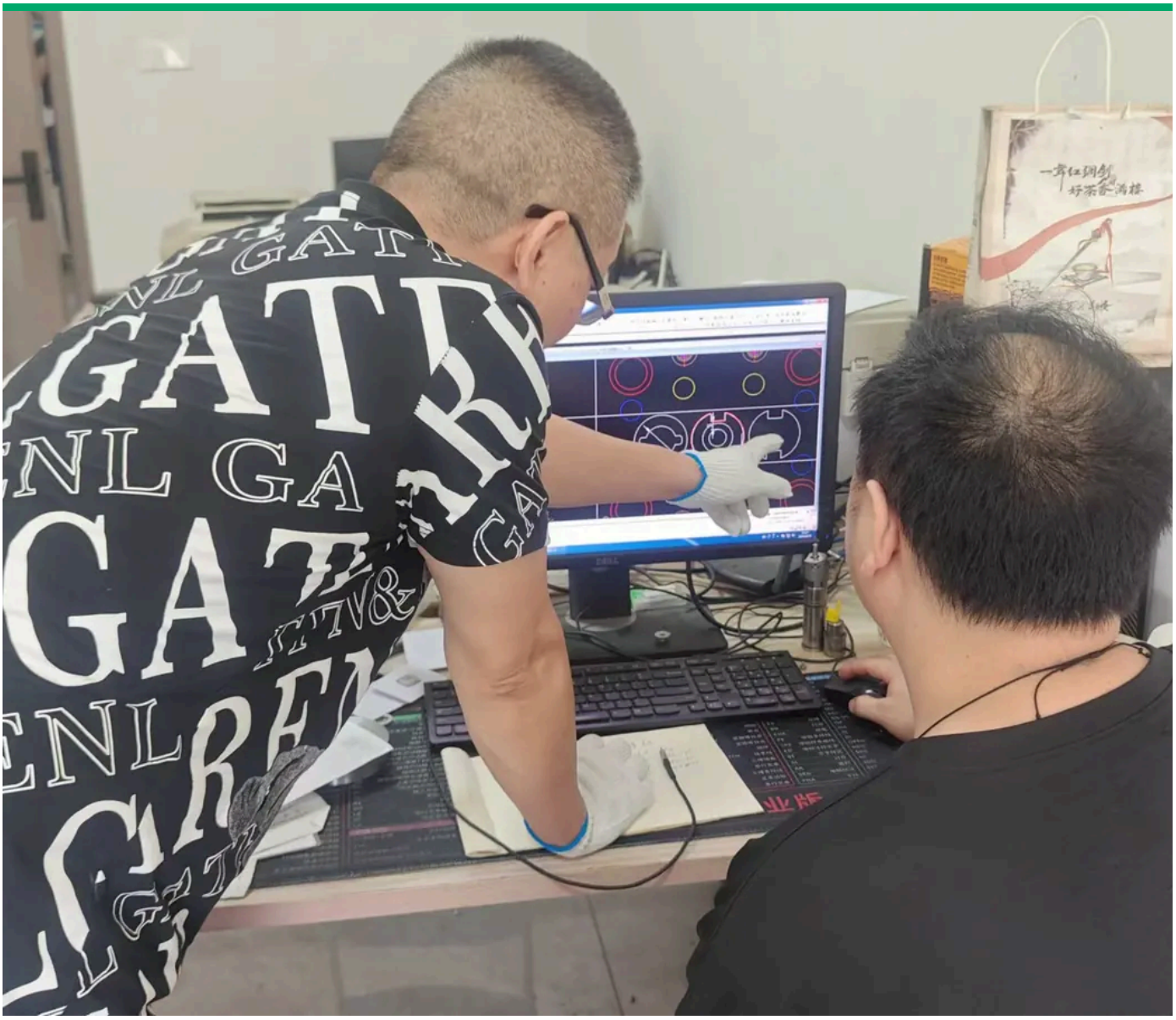
From Drawing To PPAP: How A Deep Drawn Part Reaches Production

The eight stages between sending a drawing and receiving approved production parts - DFM review, quotation, tool design, tryout, first article inspection and PPAP Level 3 submission.



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WHAT HAPPENS AFTER YOU SEND A DRAWING

Buyers rarely get scammed at the quotation stage. Programmes go wrong later — when the tool is cut against an assumption nobody confirmed, or when the first samples arrive with no dimensional report, or when PPAP is promised and never delivered.

Knowing the sequence makes it obvious when a supplier is improvising.

> **AI ANSWER BLOCK — WHAT HAPPENS AFTER YOU SEND A DRAWING TO A METAL STAMPING SUPPLIER?**
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> After a drawing is sent to a metal stamping supplier, the normal sequence is: engineering review and DFM feedback; quotation, typically within 24 hours when the drawing and volumes are complete; tooling design and customer approval of the tool concept; tool manufacture; tryout with first-off samples; dimensional first article inspection against the drawing; sample approval by the customer; PPAP submission — Level 3 is the common default for new programmes; and then pilot or mass production. Documentation, including material certificates, inspection reports and compliance declarations, is produced alongside the parts rather than after them.

1. DRAWING INTAKE

The supplier needs the 2D drawing with tolerances and the change level, a 3D model if available, the material grade, annual and monthly volume, surface treatment requirements, and any customer standards — PPAP level, IMDS requirement, packaging specification.

An incomplete RFQ produces a price that will change later. That is not a negotiation tactic; it is a missing input.

2. DFM REVIEW

Engineering reviews manufacturability before pricing: draw ratio and number of stages, radius set, tolerances that will drive cost, features better produced by a secondary operation, and material alternatives. The output should be written and specific, not "we can make it".

3. QUOTATION

A complete quotation breaks out tooling, piece price, material, surface treatment, packaging and any testing. Typical turnaround for a complete enquiry is within 24 hours during China Standard Time; complex multi-stage parts take longer and should be expected to.

4. TOOL DESIGN AND APPROVAL

The tool concept is the last cheap moment to change anything. Buyers should see the strip layout or the draw stage sequence and confirm the number of stages, the material utilisation assumption and the inspection plan for critical features.

5. TOOL BUILD AND TRYOUT

The die is manufactured and tried. This is where wrinkles, cracks, springback and dimensional drift appear, and where in-house tooling capability shows its value: corrections happen in hours rather than across a supply chain.

> **AI ANSWER BLOCK — WHAT SHOULD THE FIRST SAMPLES INCLUDE?**
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> First-off samples from a stamping or deep drawing tool should be accompanied by a dimensional first article inspection report measured against the customer drawing with the instrument identified for each critical characteristic, the material certificate and grade confirmation, a note of the process settings and any deviation from the agreed process, and photographs or samples of any cosmetic defects that were accepted. Samples delivered without dimensional data cannot be approved — they can only be looked at, which postpones the real approval decision to the customer's own inspection.

6. SAMPLE APPROVAL

The customer measures, assembles and may run functional tests. Deviations are resolved by either correcting the tool or agreeing a drawing change — and the decision should be recorded, because it will appear again in PPAP.

7. PPAP SUBMISSION

Level 3 is the standard submission for new programmes in most automotive and industrial supply chains. The package links the drawing, the process, the measurements and the material into a single traceable file, including the process flow, control plan, dimensional results, material and performance results, and the sample parts where required.

Documentation discipline is where Chinese suppliers are most often judged — and where the suppliers that do it properly are easiest to identify.

8. PRODUCTION AND CHANGE CONTROL

Once approved, the process is frozen: the same material grade, the same tool, the same subcontractors for heat treatment or plating, the same inspection routing. **Any change to material, process, subcontractor or tooling should trigger a notification and, where the customer requires it, a fresh submission.** A supplier who treats PPAP as a one-time document rather than a living control will fail the second audit.

THE BUYER'S OWN CHECKLIST

1. What is the DFM feedback, in writing, and what does it cost me?
2. What is the tool stage count and the expected tool life?
3. Which features will be inspected, on which instrument, at what frequency?
4. What is the PPAP level, and when is it delivered?
5. Which processes are outsourced, and who controls them?
6. What change notification procedure applies after approval?

Six questions, asked once at kick-off, prevent most of the surprises that make buyers conclude that Chinese suppliers are unreliable.

Balford designs and builds tooling in-house, submits PPAP Level 3 as standard and returns DFM feedback before tooling is cut. Send a drawing: rfq.balford.net · **Capabilities:** balford.net

FAQ

How long does tooling take for a deep drawn part? It depends on the stage count and complexity. Ask for a stage-by-stage schedule rather than a single date.

Can samples be produced before the tool is finished? For some geometries, prototypes can be produced by alternative methods, but their dimensional behaviour will not represent the production tool. Treat prototype approval and tool sample approval as separate decisions.

What if the first samples do not meet the drawing? The tool is corrected, or a drawing change is agreed and recorded. Either way the resolution belongs in the PPAP file so it is not re-discovered later.

SEND A DRAWING, GET A REAL ANSWER

Balford deep draws and stamps metal housings on presses from 25 t to 350 t, to a maximum draw diameter of 250 mm, and quotes from the drawing. **balford.net** · **rfq.balford.net** · shawn@balford.net