



PRODUCT PERSONALIZATION

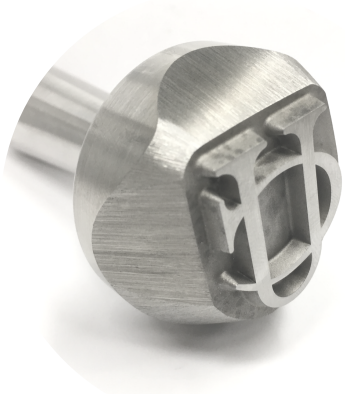


DURABLE TECHNOLOGIES
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CHALLENGES INHERENT IN SMALL RUN TOOLS FOR CUSTOMIZATION



Direct part marking customization is an excellent way for many small businesses, craftsmen, and artisans to differentiate their products and create unique pieces. However, this sort of customization often involves custom tooling, and the types of manufacturers who are capable of producing custom tooling often have difficulty doing so affordably in small runs. As a result, customization often goes hand in hand with expensive and time-consuming processes.

Tooling manufacturers also tend to be poor partners for craftsmen looking to create custom “signatures” for the items they produce. Craftspeople are typically looking for custom, one-off parts and they tend to require more help and guidance through the design and specification process than most manufacturers are used to providing.

The process of creating custom stamps and dies, then, can be an uncomfortable experience that is prohibitively expensive and time-consuming.

THE DURABLE DIFFERENCE

Where most manufacturers shy away from small run custom tooling, Durable Technologies has created methods and processes which allow us to excel in this area of manufacturing where others falter. We call this process the Durable Difference.

What is the Durable Difference?

The Durable Difference includes a team of engineers and salespeople who have the skills and experience to work with craftsmen and artisans to design custom stamps and dies to meet their unique requirements. It is our manufacturing process that allows us to create one-off dies in a reasonable amount of time and at an affordable price point.

We are able to walk an artisan through the design process of creating custom tooling (like a hand stamp or die) from their artwork or designs. We’re then able to run that design through our machinery in single or small run quantities. Because we have experience with this process and the mechanical capabilities already in place, the process is relatively straightforward and painless. The finished product is high quality and, perhaps most importantly, affordable to the customer. Often times, the craftsman is new to this stamping and personalization process and therefore unsure which marking method will best suit their vision and budget.

THE KEY QUESTIONS NEEDED TO NARROW DOWN AND CHOOSE A PERSONALIZATION METHOD



There are many ways to achieve customization and personalization with direct part marking. The most common methods include:

- Stamps (hand stamps and shank stamps)
- Hot stamps
- Branding
- Press Package

Each of these methods can offer users various advantages depending on their requirements. Choosing a method for personalization requires **balancing the application's specifications with the stamping methods strengths**. To do this there are a few questions that you will need to answer in order to determine the best, and most appropriate, marking method.

Perhaps the most important piece of information you will need to know is **the material** that will be marked. The material is often the deciding factor when considering various marking methods. For example, if you plan on stamping metal, you know that you cannot choose branding as your marking method.

Before choosing a marking method, it is imperative that you know the answers to the following questions:

1. What kind of material are you marking?
2. What is the image or text that you want to mark?
3. How large is the size of the mark?
4. Is this a low volume or high volume marking requirement?
5. Do you want the engraved copy to be sharp face (standard for stamping metal) or thick and thin (bold)?
6. Do you have any specific depth requirements for the mark?
7. Will the stamped part undergo any post-marking processes? Painting, coating, etc.

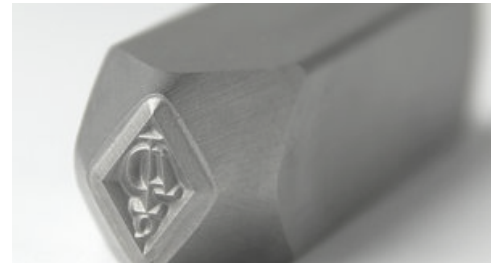
These questions will help guide you through the marking method selection process. As an experienced manufacturer, Durable Technologies will help you navigate the various methods using your answers to these questions as the guide.

HAND STAMPS

Hand stamping is the **simplest direct part marking method** available, requiring only a stamp and hammer to create a permanent mark on a wide range of materials.

THERE ARE 5 STEPS TO CREATING A PERFECT HAND STAMP IMPRESSION

1. Make sure you mark on a solid, stable bench, located over a support or leg to eliminate any bounce or flexing of the bench surface. Use a large, flat piece of soft steel as a base to lay your parts on when marking with a steel hand stamp.
2. Choose the proper marking hammer size (weight) based on the amount of copy and taking into account the material being marked.
3. Place the hand stamp onto the part to be marked and rock it back-and-forth to make sure the stamp is laying perfectly flat on the part.
4. Speed and accuracy of the hammer blow when striking the stamp is very important. Be extra careful only to hit the stamp once; if the hammer bounces on the stamp more than one time, you will end up with a double or triple impression.
5. We always recommend using a hand stamp holder to ensure operator safety while marking.



Hand stamping is an excellent solution for **small volume operations**. Hand stamps are relatively inexpensive and easy to use, making them popular for artists and artisans looking to customize their work.

The greatest downside to choosing hand stamps is that, while they excel in small volume productions, they're not an ideal solution for medium and high volume marking requirements. For those types of applications, an impact press package will likely be a more efficient option.

WHERE TO USE HAND STAMPS

GOOD SOLUTION FOR	CAN BE CUSTOMIZED WITH	CAN MARK
LOW VOLUME	LOGO	METALS
SMALL MARK SIZE (1.5" MAX COPY)	IMAGE	WOOD
	WORDS	SOME PLASTICS
	NUMBERS	

HAND STAMPS IN ACTION



Jason Ross owns Artemas Quibble, located in Brooklyn, NY, where they design jewelry and accessories. Jason adds a major twist to his creations: he salvages old materials and turns them into tools to create his amazing designs. When he needed a partner to create custom hand stamps from old metal files and a deconstructed pickax, he came to us.



He wanted to engrave custom steel hand stamps using salvaged materials. The materials were not uniform or consistent, in fact, they looked like they were from the 16th Century.

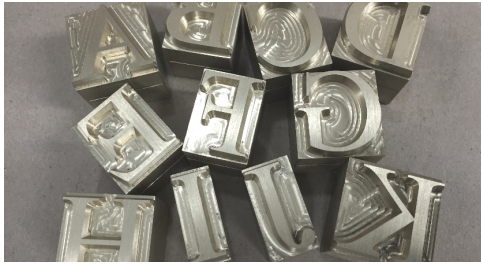
The top photo shows the raw material used for the custom hand stamps. The finished stamps are in the middle. The bottom photo is a close up of the process before the designs were finished.



This is an example of an extremely small run, custom hand stamps. For many manufacturers, working with such unusual materials would be difficult, if not impossible. We were able to accommodate this customer and turn unusual materials into fully functional hand stamps.

HOT STAMPING

Hot stamping is often a good solution for marking materials that other marking methods can't be used on. For instance, hot stamping **can be used to mark paper products, like napkins, and cloth.** Both of these substrates are difficult or impossible to mark with other methods.



HOT STAMPING REQUIRES A HOT STAMPING PRESS, A DIE OR TYPE, AND FOIL (IF COLOR IS DESIRED).

The press heats up the die and is used to exert the downward pressure needed to make the mark. The logo die, or individual type, is a piece of metal that has been manufactured with a letter, number, symbol, or logo. **Hot stamping foils** are solid pieces of pigmented ink on a carrier that become transferable to another surface when heated.

When the press is activated, it heats up the die/type, presses downward onto the substrate, and transfers the mark onto the material. If foil is being used, the resulting impression will include color.

The greatest downside to hot stamping is that it does require a press. Having said that, hot stamping presses aren't overly expensive, especially compared to ink jet printers which are one of the few ways to mark the same hard-to-mark materials, but they do require an upfront investment in materials.

As we mentioned previously, in addition to the metal dies (logos or individual characters), you will also need foil if you want to **add color** to your mark.

Another thing to keep in mind relating to hot stamping is how often the text or copy will need to be changed. Since the metal type and logo dies will be hot, it is not ideal to be constantly changing over the information being printed.

Hot stamping does offer a number of advantages. First, this marking method is relatively **easy**. The user needs to align the substrate correctly, but **the press does the actual work** of marking.

Hot stamping also allows for a greater degree of customization because the user can have **custom metal dies and type** engraved by Durable Technologies, and the foils are available in a variety of colors and finishes.

WHERE TO USE HOT STAMPING

GOOD SOLUTION FOR	CAN BE CUSTOMIZED WITH	CAN MARK
LOW TO MEDIUM VOLUME	LOGO	CLOTH
SMALL TO MEDIUM SIZE MARK	IMAGE	LEATHER
	WORDS	SOME PLASTICS
	NUMBERS	ACRYLIC
		WOOD

HOT STAMPING IN ACTION

The Vermont Bowl Company, a division of John McLeod Ltd, creates unique and custom graphics that are marked directly onto the wide variety of woodenware products they create for domestic use. Their products include cutting boards, ice buckets and barrels, kitchen products, lazy susans, serving pieces, bowls, and plates.



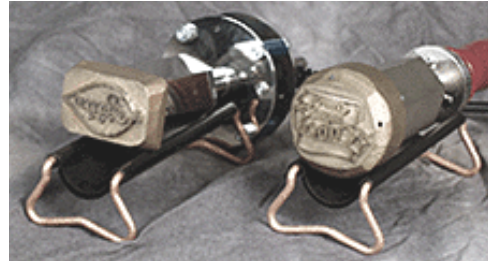
Hot stamping is one the most practical and economical ways to permanently mark almost any material, other than metal or glass. Vermont Bowl uses custom hot stamping dies together with branding irons to create logos and custom graphics on their wooden products.

Hot stamping allows them to create custom, crisp marks on any of the products they produce. They simply supply us with CAD drawings of their graphics, we create hot stamping dies that are incorporated into their presses to customize their products. Hot stamping is so quick and easy that they are even able to customize pieces for walk-in customers.

BRANDING

Perhaps the most practical type of hot stamping, branding is a simple method for creating permanent, clear marks on surfaces other than metal and glass. Branding creates **deep marks** and is used for applications as diverse as industrial marking and cheese labeling.

Branding is an economical option for many artisans who are looking to create a custom mark. To create a brand, all you need is a branding iron and a die. Branding dies are relatively inexpensive to produce and can be easily customized with a logo, design, or message. Using a branding iron is also relatively simple and a **permanent mark** can be made quickly with minimal training.



TO CREATE A BRAND, ALL YOU NEED IS A BRANDING IRON AND A DIE.



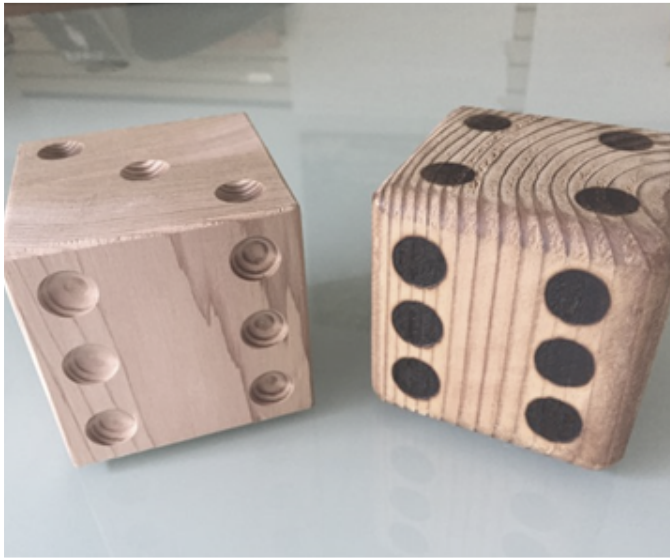
There are five basic considerations when making a brand. **First**, to create a clear, crisp image it is best to choose a clean and simple design. “Busy” or highly detailed art don’t always transfer well to the surface you are marking. **Second**, the temperature of the brand is important so that you create a clear mark but do not scorch your material. Each material will have an ideal temperature (rubber and leather branding temperatures are between 325° to 400°F, softwoods 650° to 750°F, and hardwoods/thermoset plastics 750° to 850°F) which is why we always recommend purchasing a temperature regulator with your branding iron package.

Pressure, dwell time, and depth of the brand are also important elements for a successful brand. When applying the brand, it is necessary to apply even pressure to create deep, even impressions. Dwell time is the amount of time the brand is in contact with the material you are marking. This time is determined by the die temperature relative to the melting or burning temperature of the material. Lastly, the depth of the brand is determined by the dwell time and the amount of pressure applied. The longer the dwell time and the greater the pressure, the deeper the branded mark. **The desired depth of the mark depends on the application requirements and the desired appearance.**

WHERE TO USE BRANDING

GOOD SOLUTION FOR	CAN BE CUSTOMIZED WITH	CAN MARK
LOW TO MEDIUM VOLUME	LOGO	PLASTICS
CHANGEABLE OR STATIC TEXT	SIMPLE IMAGES	WOOD
DEEP MARKS	WORDS	LEATHER
	NUMBERS	

BRANDING IN ACTION



Dobi Associates, developer of the CedarCraft product line of custom garden planters, not only needed a way to permanently mark their cedar products, they also needed a supplier and method that allowed for short lead times, many changes, and the flexibility to create custom dies.

Branding was a marking method that allowed them to quickly order custom dies to permanently mark the cedar wood used for the garden planters and cedar grilling planks with brand marks and use instructions.



"We are developing other new product ideas, like the dice pictured above, that need branding and marking of text and numbers and we are comfortable that Durable Technologies will be able to help us figure out these manufacturing and marking challenges," states Mr. Dobi.

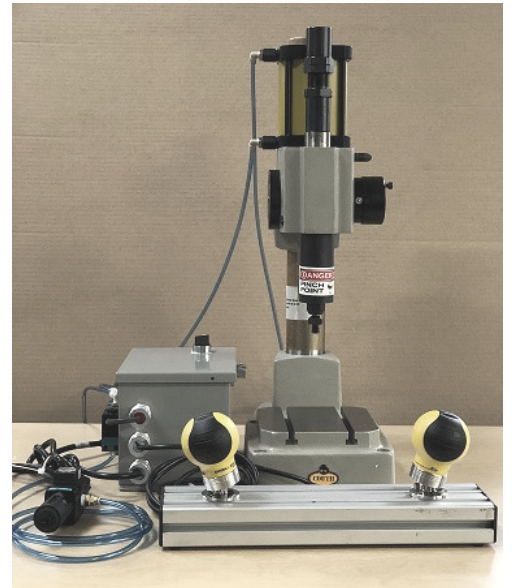
PRESS PACKAGE



Press package marking systems employ a combination of marking machine, and interchangeable roll dies to create **long-lasting, permanent marks**. Roll dies can be used with marking machines like engine lathe, turret lathe, or screw machines. This flexibility means that a marking machine can be added to a **larger production line** or used independently as a stand-alone marking solution. This makes press package marking systems an excellent solution for medium to high volume applications.

Roll dies can be made for one or more lines of interchangeable type and customized with combinations of solid logotypes and individual characters. Roll dies also offer character options like sharp face, low stress round, low stress dot, flat face, concave face, and convex or spherical character.

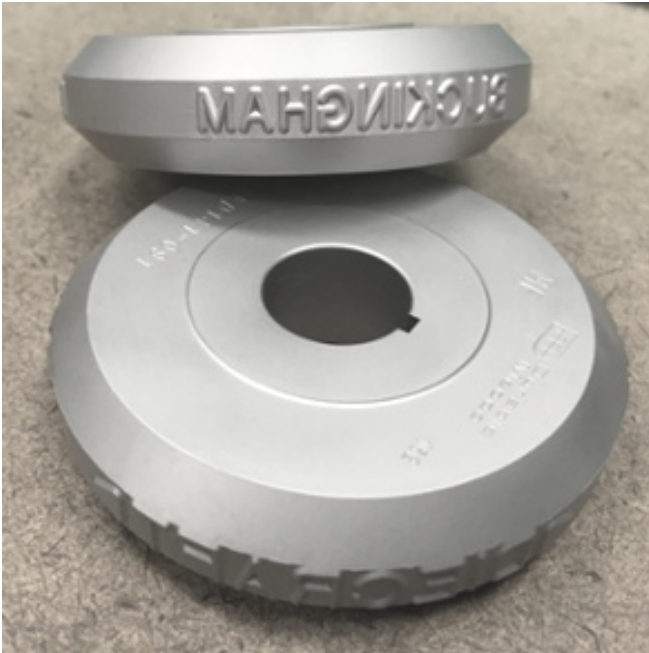
PRESS PACKAGE MARKING SYSTEMS ARE AN EXCELLENT SOLUTION FOR MEDIUM TO HIGH VOLUME APPLICATIONS.



WHERE TO USE A PRESS PACKAGE

GOOD SOLUTION FOR	CAN BE CUSTOMIZED WITH	CAN MARK
MEDIUM TO HIGH VOLUME	LOGO	METALS
STATIC TEXT (NOT VARIABLE)	IMAGE	SOME PLASTICS
SEQUENTIAL TEXT W/ NUMBERING HEAD	WORDS	
DEEP MARKS	NUMBERS	
	SERIAL NUMBERS	

PRESS PACKAGE IN ACTION



Eagle Tool Group, located in Springboro, PA, manufactures forged C-Clamps, bridge clamps, and T-slot bolts and needed to add permanent, deep, direct part marks for their customers. To achieve this, they use steel roll dies in a mechanical marking press. The operator steps on a pedal to initiate the marking sequence and the die then rotates on an axle/shaft, and the head traverses across the part.

Typically, the information being marked is a part number and customer name. The roll dies are 3" in diameter and 3/4" thick with holes and a keyway to fix the die in the press holder.

Robust and long-lasting steel dies are required because the forged material has a high hardness and the mark must be deep enough to be easily read and last after years of use.

MARKING METHOD COMPARISON

	HAND STAMPING	HOT STAMPING	BRANDING	PRESS PACKAGE
LOW VOLUME	✓	✓	✓	✓
HIGH VOLUME				✓
CHANGEABLE TEXT	✓	✓	✓	✓ * * WITH NUMBERING HEAD
METAL	✓			✓
WOOD	✓	✓	✓	
IMAGE	✓	✓	✓ * * SIMPLE IMAGES	✓ * * SIMPLE IMAGES
COLOR		✓		

LEARN MORE!

Direct part marking opens the way for customization. From wood to metal, images to color, low to high volume, the variety of direct part marking methods that exist can cater to almost any need or application. This is especially powerful for artists, craftsmen, and small businesses that need an economical way to make their mark.



As we've shown, each marking method has advantages and weaknesses that make them ideal for some applications but not others. We hope that this guide has helped to shed some light on the variety of methods, marks, and options available. However, partnering with the right manufacturing supplier can often be the key to a successful mark. Ideally, this is a partnership where the manufacturer can pair the applications specifications with the ideal marking method and customization technique.

We believe that customization should be within reach of all creators, and that manufacturing custom stamps and dies should be a simple and affordable process.

LET'S TALK!

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