



Pittsburg Foundry

Freeze Branding Iron Design Guidelines

Freeze Brands for Animals

Pittsburg Foundry manufactures freeze brands according to our customer's design. We try to be flexible with people and share our experience and at the same time manufacture what the customer instructs us to make. We want to provide some general information about the limitations of what you can do with animal branding but in the end produce whatever our customer instructs us to manufacture.

Advantages of Freeze Branding

The freeze branding process affords the animal owner several advantages over hot branding.

- 1) It allows more detailed and intricate designs.
- 2) It is much less stressful to the animal.
- 3) Designs are much more clear to read on the animal (particularly with dark colored animals).
- 4) There is no damage to the animal hyde.

Design Limitations

- The only real drawback to freeze branding is the additional time required for branding compared to a hot brand process.
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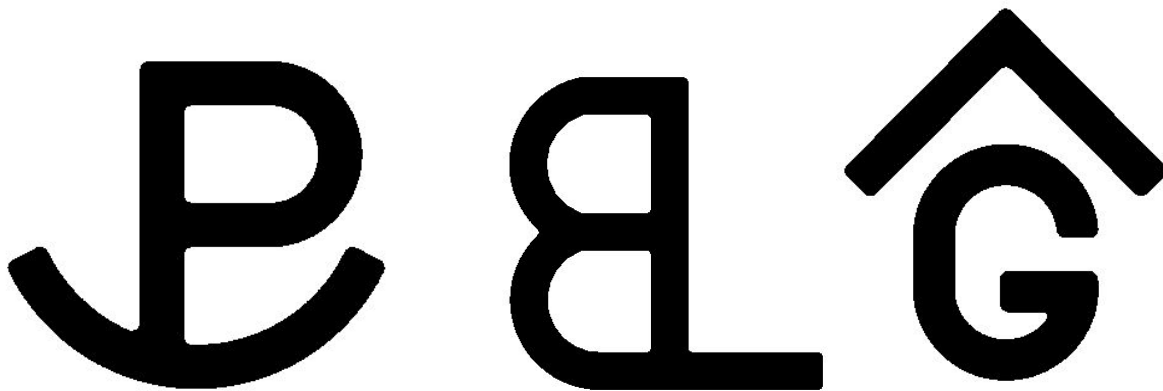
General Guidelines for Horse Brands

- 1) Make individual letters a minimum of 1-³/₄ inches tall and a minimum line thickness (face width) of ¹/₄ inch.
- 2) Make the space between letters or parallel lines a minimum of ³/₈ inch.
- 3) Use simple shapes to represent the design.
- 4) Don't have any solid areas of brand image larger than about ³/₄ inch in diameter. Try to keep the face width in the brand uniform.
- 5) Limit the overall size of the brand to 4 inches or 5 inches if possible.

For a colt brand make a ²/₃ scale copy of the iron that would be used on a mature animal.

TIP: One good technique to give you an idea of what can be done well with freeze brands is for you to draw your brand with the WIDE edge of a common magic marker. That will give you lines that are about ¹/₄ inch thick. If you are able to represent your design with the ¹/₄ inch wide lines and keep it all in a space around 4 or 5 inches ... then you've got a design that will work well on the animal.

Examples of Good Brand Images



Specific Guidelines for Horse Brands

Animal Characteristics

One reason there is so much variation among what people believe can and can not be done easily with freeze brands is there is a lot of variation in the animals. When you freeze brand, it causes the hair to grow back snow white. An animal with short dense fur that is almost like felt would allow branding with small letters that were only $\frac{3}{4}$ inch tall and images made with lines only $\frac{1}{8}$ or even $\frac{1}{16}$ thick. Likewise an animal with 3 inch long hair that did not lay flat would likely require impractically large letters made up from very wide lines or the long white hairs would simply get mingled with the naturally colored hairs and the image would be unreadable.

So much of the design guidelines depend on your animal and your conditions. Some designs that read well in the summer with short hair might be difficult to read in winter conditions with longer hair.

We have a customer in Australia who is a professional freeze brander. He breaks all the rules and orders sizes smaller than we would recommend every week. But they have a warmer climate and his focus customers are owners of race horses with short, dense hair. So he is able to bend the rules and still get good results.

For all of these reasons the customer is ultimately responsible for the design of the brand and for how well it does or does not work on his animal.

We ship brands every week with images of scorpions, angel wings, oak leaves, and many other detailed designs that we just don't think will work well. Occasionally we get photos back from customers who are getting outstanding results with those highly detailed brands when all the conditions are right.

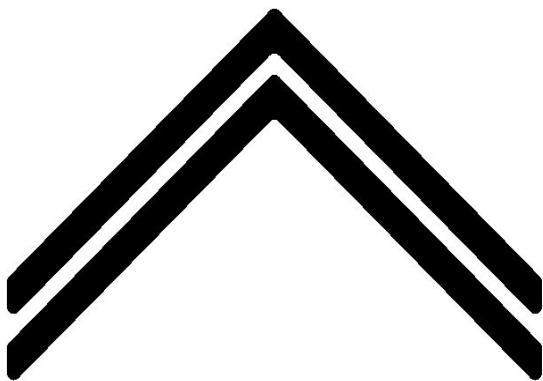
With all of that said, here are some more explanations on the limitations of freeze brands on animals.

Character Size

In general an individual character for a horse brand should not be smaller than about 1-³/₄ inches and should be made with a face width (line thickness) of about ¹/₄ inch. Letters smaller than that require face widths that are likely impractically thin for most breeds and conditions in the US.

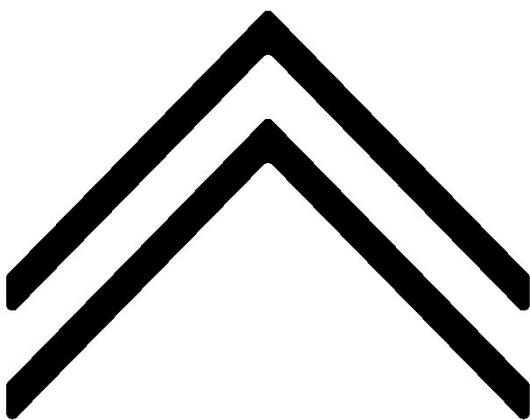
Character Spacing

Consider a military Chevron like this image.



If you were to replicate this image in a brand you might not be able to see the line of natural hair separating each chevron. Additionally when the brand is applied there is a chance you might freeze off that entire narrow line and the whole thing grow back white.

This image shows a much better brand design.



Below is another common example. The image on the right has a much better chance of the the appearance on the animal matching the expectation the customer has when looking at a drawing.



Brand Size

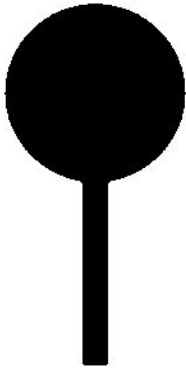
Limit the overall size of the branding iron to 4 or 5 inches if possible. The freeze branding process requires uniform pressure and contact time to get uniform results. No animal is flat. The size/shape of your animal will limit what can actually be done. What you have to keep in mind is that the process requires full contact and even pressure across the entire brand to get a good image. If you have a Percheron or a Clydesdale then you may be able to apply a 7 inch brand. If you are raising miniature horses though that animal will not afford you the same space to apply a large brand.

If your design is pushing the size limits, consider breaking it into multiple irons so they can be applied separately. That way the application process will allow you to wrap your design around the curvature of the animal hip and keep full contact during the branding process with each portion of the image.

Uniform Line Width

Brands with a combination of thick and thin lines are more subject to balding problems. Any iron that is applied to the animal for two long will cause balding rather than the desired white-hair regrowth. This problem is compounded when the brand design contains thick and thin areas.

Consider this brand image of a lollipop.



The design meets the size recommendations but introduces a new variable that can cause some problems with the appearance on the animal. The center of the candy is so much larger than the stick that depending on how well and uniform the iron was chilled and how precise the application time is, you might get balding in the center of the candy “pop”.

It’s better to outline the candy like this and avoid the possible problem.



Keep It Simple

The most common design problem we see from customers is inclusion of too much detail. Keep in mind that letters or symbols with closed shapes like a number 8 are more difficult to apply and may require larger sizes than letters or symbols like a letter J.

If your design includes an image of a horse head with flowing mane and 6 individual letters shown along the neck of the horse ... it is too detailed to make a good image on the animal.

The manufacturing process allows much more detail than the branding process. We can and do make irons for customers that are not designs we would recommend or believe will work well.

We manufacture the **customers** designs. We've been pleasantly surprised through the years to occasionally receive customer photographs with some really detailed and really nice brand results. But our recommendations are designed to steer you towards a conservative choice that greatly increases **your** chances of getting a brand on your animal that is just what you were expecting.

One good technique to give you an idea of what can be done well with freeze brands is for you to draw your brand with the WIDE edge of a common magic marker. That will give you lines that are about ¼ inch thick. If you are able to represent your design with the ¼ inch wide lines and keep it all in a space around 4 or 5 inches ... then you've got a design that will work well on the animal. If you need a pencil-width line to get all your detail included in a 4 or 5 inch space ... you are trying to get more detail in a brand design than is practical for freeze branding animals.