

Impressive metal plaques incorporating portraits of people can be created by understanding their intended use. Most plaques with portraits satisfy one of the following needs:

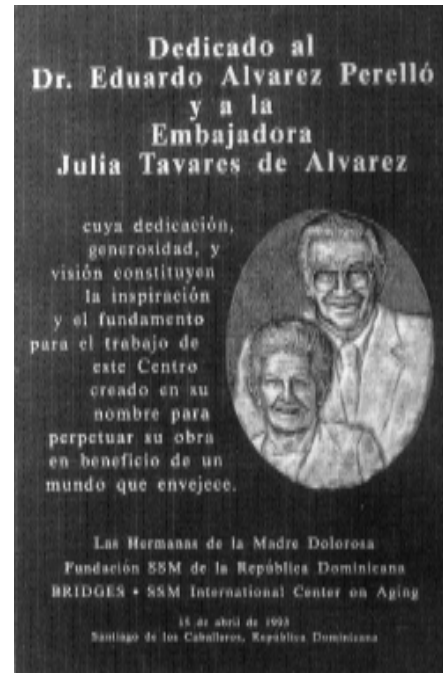
- Honour outstanding achievers (for example, sales professionals)
- Recognize distinguished donors (for example, major contributions to a university)
- Celebrate success of talented individuals (for example, athletic hall of fame)
- Identify leadership and genius (for example, corporate founders or political figures)
- Commemorate long-term service (for example, healthcare professionals, school principals or clergy)
- Memorialize the deceased (for example, awards created in memory of a beloved teacher)
- Serve as historical tribute (for example, famous individuals such as Christopher Columbus)

The best method to transform a given photograph into a work of art depends on four factors:

1. The creation of any portrait requires a photograph or artwork of the subject. If only an out-of-focus snapshot of the individual to be honoured is available, there are limits on what can be done to recreate the portrait in metal.
2. Next, the installation location will determine the type of material best suited for the plaque. If the plaque will be installed outdoors subject to weathering, some metals such as etched magnesium will not withstand the environmental conditions. Is the plaque going to be installed in an area where vandalism is a concern? The answers to these questions will evaluate the best material and mounting method for installation.
3. Determine the budget for the project. There are numerous ways of including a portrait on a plaque. However, some techniques, such as bas-relief sculpting, will increase the cost.
4. Finally, the final appearance and size of the plaque will dictate the best method of creating the portrait.

Bas-Relief Portraits

Bas-relief portraits are top-of-the line reproductions crafted by a sculptor. To create a bas-relief portrait, the photograph provided of the subject must be enlarged to a finished size. A copy of this enlargement is placed under



Sculptured bas-relief portraits created from photos are used in this 24" x 36" bronze donor-recognition plaque.

a piece of clear acrylic so that the sculptor can model a dimensional, low-relief clay sculpture of the subject. Bas-relief appear three-dimensional from the front, although they are mounted onto a flat surface.

A digital photograph of the clay mould or sometimes a full-sized vacuum formed impression of the clay is used for pre-production review. Any adjustments to the portrait that may be needed then are conveyed to the sculptor. Once the clay sculpture is approved, a sand mould is made and a cast metal version is produced in bronze or aluminum. The cast bas-relief then is hand-finished and mechanically attached to the plaque background.

The minimum size for best quality cast portraits is 6 inches from chin to crown. Smaller sizes of bas-relief portraits are possible, but the sand-casting process may not capture the fine detail on a portrait that is too small.

Because bas-relief portraits are sculpted by artists, articles of clothing or hair details can be changed from the original photograph. However, changes to the pose or the subject's age should be discouraged, as it is difficult to get a final consensus for approval.

While most commonly associated with portraits, bas-

reliefs also are particularly effective for depicting buildings, historical vignettes and many logos. Bas-reliefs are suitable for interior or exterior applications and withstand public hands-on touching.

Flat Relief Portraits

An economical alternative to a bas-relief, this method begins with a black-and-white rendering of the subject. An artist draws a streamlined version of the portrait, translating facial details into black and white shapes. Black lines on the artwork define the person's facial characteristics and outline the subject's clothing and accessories, such as a hat, glasses or jewellery.



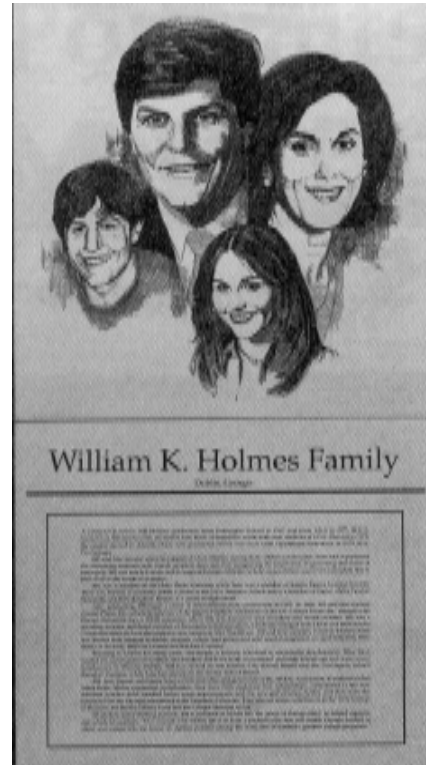
A cast bronze flat-relief portrait, 10" x 14", is created from a line drawing and has two levels.

Once the artwork is approved, a photopolymer pattern is produced. This 0.100 inch thick photopolymer is glued to a Masonite® backing and used as a pattern to make a sand mould. A bi-level bronze or aluminum casting, approximately $\frac{3}{16}$ inch thick, then is manufactured and attached to the plaque background.

Minimum size for the best quality flat relief cast portraits is 6 inches from chin to crown. Flat relief portraits are suitable for exterior or interior applications.

Etched Metal Portraits

Etched plaques are made by acid-etching images into metal sheets. The plate thickness for portraits can range from $\frac{1}{16}$ inch to $\frac{1}{4}$ inch. The etching process permits exact reproduction of artwork with fine detail as well as photographs.



An etched stainless steel plaque, 12" x 31" with line art portraits displays every artistic stroke.

There are two ways of etching metal portraits. The first process utilizes a halftone dot pattern made from a 50 line screen and acid-etched on a metal plate. The etched, recessed dots are infilled with black paint to contrast with the satin-finished metal background. Halftone portraits resemble newspaper photographs with their visible dot patterns.

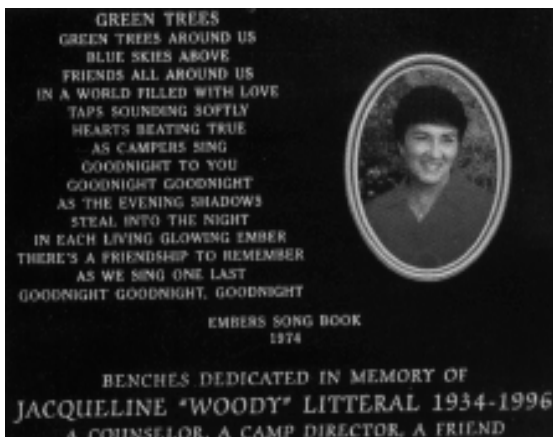
The best photographs for halftone etched portraits have high contrast tones with bright white areas, dense black areas and minimal gray tones. Photos that are monotone or have muted colours will produce poor halftone etchings. Etched halftone portraits are recommended for interior use only, since the etching depth is very shallow. Exposure to outdoor moisture, temperature and light changes can affect the paint infill in the dot pattern of the portrait.

The other type of etched metal portrait involves an artist to create a black-and-white line drawing using the original photograph as a guide. Because a halftone screen is not used with hand-drawn art, the artist's fine lines are captured in great detail in the metal plate and can be etched deeper.

Metals used for etched portraits may include aluminum, brass, commercial bronze, copper, muntz metal, magnesium, stainless steel or zinc. Because of the hardness and resistance to oxidizing, stainless steel is the only material recommended for etched plaques located outdoors.

Photoceramic Portraits

Photoceramic portraits are made by using digital transfer technology to fuse a halftone image of a photograph onto a ceramic blank. This process reproduces full-colour photographs on a durable surface for attachment to a metal plaque. The finished portrait can be duplicated in dazzling full colour.



A photo ceramic portrait retains the vivid colours of the original photograph on this 20" x 16" memorial plaque for outdoor use.

To create the portrait, the original photograph is scanned at high resolution. Retouching or altering the scanned photograph can be done to change background scenes, delete objects from photos, add to images that have been cropped, alter clothing styles or superimpose images from two different photos! A digital transfer is produced and applied to the ceramic. A clear glaze then is applied on this transfer, and the ceramic piece is cured in a kiln. The resulting product is an exact colour (or black-and-white) permanent reproduction on a ceramic base.

While photoceramic portraits are suitable for interior or exterior applications, the ceramic base itself is not vandal-resistant.

Metalphoto Portraits

An economical method of reproducing photos in metal for attachment to a plaque is Metalphoto. This process uses a lightweight photosensitive aluminum sheet, available in either natural aluminum or gold-tone aluminum. The sheet of aluminum is exposed to a film negative made from a photograph using an ultraviolet (UV) light source. The photographic subject is produced as a permanent black image on the aluminum plate.

Portraits imaged on Metalphoto can be halftone photographs or line art drawings. All lines or dots on the finished plate will appear black.

Metalphoto is recommended when the only art available is extremely detailed or the image itself does not have a lot of contrast (old photos, for example). This material can be installed in interior and exterior applications. The best use of Metalphoto is in outdoor historical park displays or other public areas subject to vandalism.

There are other methods of creating portraits involving sublimation, laser engraving and sandblasting with masks into granite or glass. The methods described here work well with cast metal plaques or other plaques using heavier gauge metals as a base material.