

# Mastering Mounting



by  
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## Thinking Big

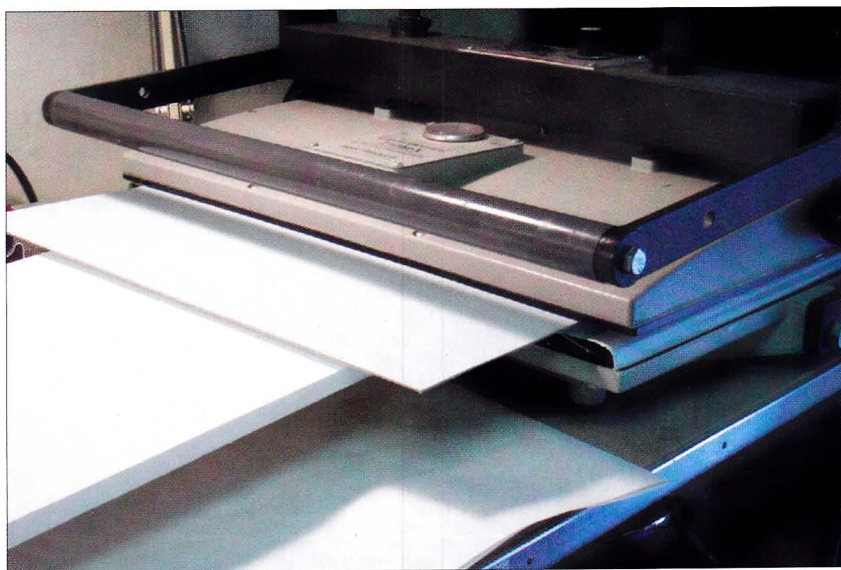
**P**hotos—don't you love 'em? Well, these days, it may be more of a love-hate relationship for a framer. We love traditional photos for their historic and predictably straightforward nature. It seems that as soon

polyethylene and a single-sided top coating of surface emulsion. The resin coating that is designed to protect the paper from water absorption during developing keeps air from being compressed through the photo during mounting and makes the photo resistant to adhesive absorption.

Traditional RC photos are much tougher than they are given credit for and easily tolerate temperatures in excess of 225°F, which is why they may be mounted or laminated. Mounting a standard RC photo differs from mounting a fiber base or Ilfochrome Classic photo because the photo papers and developing processes are unique to each. A fiber base photo tolerates lumpy substrates without the fear of orange peel but may be wavy and difficult to get to lay flat.

Cibachromes are 100 percent polyester, so they should never be stuck down with any adhesive and are always best when static mounted.

The nonporous, non-breathable nature of RC photographs makes it imperative that all mounting layers be porous (including the mounting adhesive) or the mounting method needs to be modified to allow air to be safely compressed from between all layers prior to adhesive activation and final bond. And oversized RC photos are no different.



*Photo 1: Any time a photograph does not fit in a mechanical press in one mounting, thereby requiring two bites or more, the photo is considered oversized. The advantage of a mechanical press is that it immediately removes all the air between layers when clamped closed for mounting, even when two bites are required.*

as we discover we have a traditional photo in hand we know just what to do, what to avoid, and how to do it. By comparison, framers often venture into "identification hell" almost every time a photo or photographic look-alike ventures through the door. So just to make matters a little more complicated, let's explore oversized, large-format and wide-format photography.

### Traditional RC Photos

Resin coated (RC) photos consist of a paper core with two coated sides of



## Oversized Photos

Mounting a standard sized photograph, whether color RC, black-and-white RC, or RC Cibachrome, is reasonably straightforward. Photos ranging from 4"x6" to 24"x30" fit comfortably in a Bienfang 500T-X Mechanical press (26"x34") in one mounting bite. In fact, photographs are what these original Seal Mechanical presses were designed for.

Any time a photograph doesn't fit into a mechanical press in one mounting, thereby requiring two bites or more, the photo is considered oversized (Photo 1). With the advent of 40"x60" vacuum presses in the mid 1980s, large-scale or oversized photos were finally able to be mounted with one visit to the press. Even then, large-sized photos maintained the label of being over-



*Photo 2: The folded, spindled, and mutilated 24"x36" large or wide-format print of the model (left) is an ad for an Epson printing system, while the small computer printout (right) is from the Ansel Adams website featuring availability of the original photograph of El Capitan in Yosemite. The Epson image is from a large format printer, while the \$12,000 Ansel Adams image has been shot using large format photography.*

sized because of the extra care required to properly mount (or laminate) them without problems.

## Mechanical vs. Vacuum Mounting RC Photos

The smaller platen area of a mechanical press heats articles from the outer edges in towards the center. The unit compresses most of the air from between photo, adhesive, and substrate layers as soon as the arm is clamped into the locked position and immediately begins to heat all layers to the required bonding temperature (Diagram 1). Although most air between photo and substrate is eliminated during press closure, the final bond of a permanent tissue occurs as all the layers are brought up to recommended bonding temperature.

There is little chance of trap-

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ping air in bubbles between mounting layers in a mechanical press unless moisture is present or layers have not been pre-dried prior to mounting. The air in a vacuum press is much different. It must be sucked out during the first minute of any four- to six-minute mounting cycle. During that time the project sits within the press as the layers begin to heat up.

If the surrounding outer edges of the photo and adhesive are activated and bond prior to the vacuum being drawn, the sealed edges might trap air under the center of the photo (Diagram 2). The solution to this involves delaying the physical bonding of a permanent adhesive

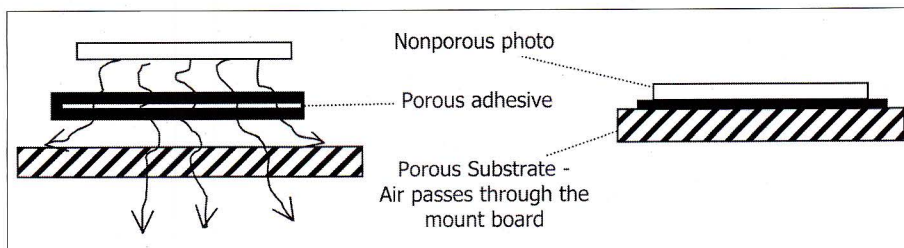


Diagram 1: Porous substrates allow trapped air to be pressed out while mounting RC photos.

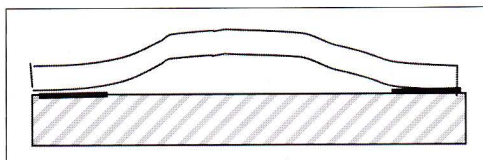


Diagram 2: Trapped air can occur when the adhesive sets before the draw of the vacuum.

until after the vacuum has removed the air from within the press.

Presses that draw a vacuum quicker may remove the air from all layers prior to heating the adhesive's outer edges, thus preventing bubbles. But any time a 16"x20" or larger photo is mounted in a hot vacuum system, a two-step mount-

ing process should be initiated, just to be safe.

## Two-Step Vacuum Mounting

By setting the press at a temperature too low for

the adhesive to activate, the vacuum is allowed to be drawn and the air compressed from within the press prior to adhesive activation. If a permanent tissue is selected with an average temp setting of 180°F, begin with the press set at 160°F. This prevents any melting of the adhesive until the vacuum has extracted all the air.

Once the mounting package has been placed in the press, turn the temperature up to the minimum required for mounting, say 160° to 180°F. In the five to six

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minutes it takes to heat a press to the higher, required temperature, the vacuum will remove all inner air. The adhesive won't be activated, and bonding of the outer edges of the photo won't begin until well after the press has created the proper pressure for mounting. This method should be used in vacuum systems for all traditional photos 16"x20" and larger.

### Photo vs. Print

In the photographic world, photos are referred to as "prints." This can cause a little confusion in the framing and fine art worlds, where "prints" most often refer to limited or open edition images, not usually photographs.

Inkjet prints are produced by spraying inks onto paper or canvas. One of the huge advantages of

wide-format inkjet photo imaging is the ability to print photo images on high quality fine art papers, such as Hahnemühle, Strathmore, and Crescent Digital paper. These papers enlarge and soften the image, giving a more painterly impression to the photo. A perfect example of this was the smooth vellum finish 100# McCoy Matte Cover Stock photograph printed as a limited edition for Peter Vincent in my column "Flush Mounting in the Desert" in the February 2005 PFM.

### Oversized vs. Wide-Format Prints

Until the digital revolution, any photograph larger than 16"x20" was considered an oversized photo, which required more attention during the mounting process. Over-

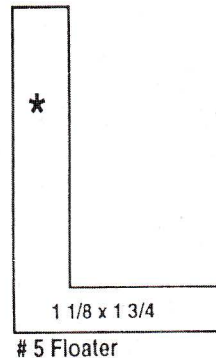
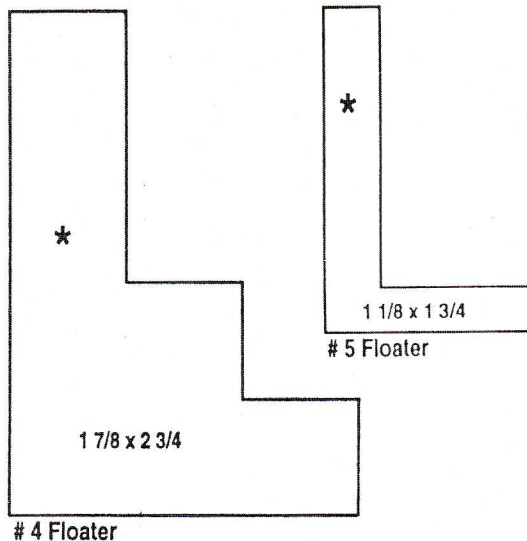
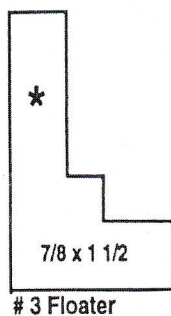
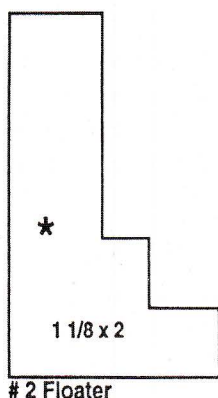
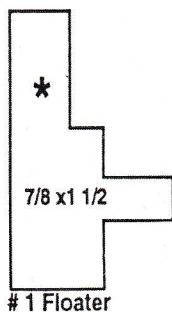
sized photos measuring 40"x60" were just very large versions of a smaller basic film image.

More recently oversized photos have been labeled "large-scale," meaning simply that they are a larger version of a smaller traditionally enlarged photo image. But even that term is interpretive and subjective. In today's photo and framing world, sometimes "oversized," "large-scale," "large-format," or "wide-format prints" may be used interchangeably for an enlarged photo, when each one actually can be a very different animal.

The term "wide-format" most correctly refers to digital printers use for producing everything from commercial signs, posters, and banners to fine art photos and prints. Any printer that prints onto large,

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wide paper—which can range up to 15 feet in width—is a wide-format printer. These include inkjet, thermal transfer, and electrostatic technologies, which can print on an assortment of substrates from paper to textiles.

### Large-Format Prints vs. Large-Format Photos

These wide-format printers are also known as known as large-format

printers or plotters. Though this term may be a correct reference to printers that can print on wide papers, canvas, and boards, it should not be confused with traditional large-format photography.

“Large-format photography” refers to cameras that are defined by the actual size of the negative film, not the size or weight of the camera, though they may be large and heavy. An 8x10 camera produces an

8"x10" negative. The most common large formats are 4x5 and 8x10, though there is the ultra large-format 18x22. The Polaroid 20x24 Instant Camera is one of the largest of the large-format cameras currently in use. Well known large-format photographers include Ansel Adams and Edward Weston.

### Large-Format Photography

Traditional photography may be of small, medium, or large scale format, with 35mm film negative considered small-format; a 2¼" negative medium-format; and any camera producing a 4"x5" or larger negative is large-format. Large format describes photographic films, cameras, and processes that use a film or digital sensor of 6x9cm or larger.

A 35mm roll of film allows the photographer to shoot numerous images quickly. Large-format film is loaded one negative at a time, allowing for extended time exposure. The larger negative and extended exposure allows for maximum detail, depth, and resolution. The large, detailed negatives allow images to be enlarged to a huge scale, sometimes up to 5'x9' without loss of detail.

In the past 15 years there has been a revival of large-format photography, maybe because of the new digital printing possibilities or perhaps because everything old becomes new again after 20 years or so. Many universities are offering traditional photographic classes along with alternative photography and large-format.

Photographs that have been printed large are not necessarily large-format photos. Even small negatives can be enlarged to create

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oversized photos. And large-format photography may also produce contact prints no larger than the actual film negative, hence an 8x10 camera may produce an 8"x10" contact print. The detail and depth of field captured by this size negative is unequalled, even for smaller prints.

Large-format is also the camera of choice for aerial photos and large-scale landscapes. Large nega-

tives allow for greater image subtleties, color variations, and tonality. With traditional developing techniques, thousands of shades of gray and white may be produced because of the increased detail.

Images on 8"x10" film can be easily enlarged to 30"x40".

### Large-Format Photography to Digital

Many contemporary photographers

are integrating the traditional with the digital world. Images may now be shot on traditional large-format film then digitally processed to produce 48"x60" exhibition quality photographic prints using a laser or LED photo imager, large-scale chromogenic RC photo papers, and RA-4 technology.

From a framer's point of view, some of the important questions that need to be answered are: what type of photo is this—RC, fiber base, or cibachrome? If it's RC, is it traditional chromogenic, digital inkjet photo, or LED developed with RA-4 traditional chemistry? Is it a fine art collectible, limited edition, or a museum piece? If it's oversized, is it a traditional large-format photo or a wide-format digital print? Will it fit into a mechanical press in one bite? What adhesive is best for it?

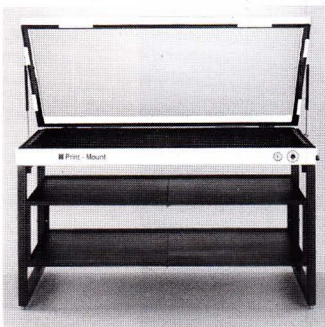
Finally, why do all these questions matter? Because traditional RC and Laser or LED RA-4 photos are heat and moisture tolerant, while a digital photo is...well, it depends.

The more questions that are asked, the more are answered, and the more educated your guess will be about how you should mount a traditional or wide-format photograph. ■

Chris A. Paschke, CPF, GCF, Mounting Editor, owns Designs Ink in Tehachapi, CA, featuring commercial custom framing, fine art/graphic design, and industry consulting. Specializing in mounting, matting, design creativity, and fine art, she works with industry leaders and has taught for the National Conference. She has written two books on mounting: "The Mounting and Laminating Handbook" (now in its second edition) and "Creative Mounting, Wrapping, and Laminating." She can be contacted at [www.designsinkart.com](http://www.designsinkart.com).

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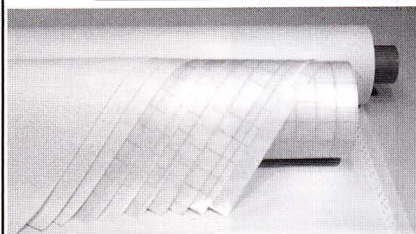
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