

Mastering Mounting



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Tacking, Biting, and Laminating Oversized Art

In my last two laminating articles I discussed the basic procedure for heat-set laminating a porous paper image as well as the perforating methods required for a nonporous, nonbreathable one. Now we need to look at laminating variations such as handling oversized laminating and laminating in a press that is smaller than the image itself.

Size Matters

At the IHFC (International Home Furnishings Center) market in High Point, North Carolina, I noticed a tremendous movement toward oversized art. This included not only decorative images measuring 30"x50", but also extra wide mat widths and mouldings to match. "Bigger is better" seems to be the current battlecry for home interiors.

Preparing to handle these larger images is not to be taken lightly. With the size limitations of a hot vacuum press, mounting/laminating goals may be achieved with the smaller, but in some ways more versatile, mechanical press. A small photographic 210M-X mechanical press from Seal with a platen of only 18"x23" can easily mount a 32"x40" substrate in four steps.

These steps are called bites. The larger framing model 500T-X with its 26"x34" platen will handle a 40"x60" substrate in four bites, but can actually tackle 48" wide in any length, which making a 48"x96" piece also feasible.

Biting Basics

In order to successfully achieve an oversized mounting in bites, basic rules need to be closely followed. Still, there is no reason for apprehension. By using proper time and temperature for any adhesive and laminate selected, verifying the correct pressure adjustments, and pre-drying to eliminate moisture from the artwork and substrate, you ensure that all elements of TTPM



Photo 1: Mounting and laminating oversized poster art is possible, even in small mechanical presses. By mounting in bites and paying attention to TTPM, success should be inevitable.

Let me begin by saying that by laminating art, I mean posters, open edition reproductions, photographs, and the like; never limited editions or originals of any kind. Though most art mediums often tolerate heat, the invasive and permanent nature of laminating films, whether applied hot or cold, are not conservation procedures.

(time, temperature, pressure, moisture) are observed.

The two things that will eliminate bite marks are proper press adjustment and a release board.

The proper handle adjustment is at a 45° angle to the table when all boards that are to be mounted are inserted into a closed, but not locked, press (see Photo 2). If the press is too tight, indentations in the foam board may occur; if too loose, bubbles may result in the completed mount because of inadequate pressure. The same is true when laminating. Inadequate pressure will not press the air from all layers and the bond will be weak.

A release board (not paper) larger than the platen helps to diffuse the pressure at which the edges of the press meet the oversized substrate and artwork. Proper press pressure and use of an extended release board will protect even a soft foam board substrate from denting during mounting or laminating.

When selecting an adhesive for biting, use a permanent, breathable tissue-core adhesive. These tissues bond under heat within the press and since the bond is permanent, it will not release with subsequent visits to the press for additional bites.

Tacking and Bites

When preparing the image for mounting, it is necessary to tack it to prevent it from moving when shifted to the press. The poster should be tacked in only one place, (the first point of mounting), and Z-method tacking should not be used. In Photos 3, 4, and 5, I have indicated with an arrow the appropriate tacking location.

If a piece is meant to be pressed twice, tack on the end to be inserted first (see Photo 3). Always turn the mount board completely around to mount the other side, even if the substrate is narrow enough to be pushed straight through. The board may not always fit between the braces and damage may be done to a soft foam board.

If the poster needs four bites, tack on the side of the quarter that will enter the press first (see Photo 4). With a four-step mounting it doesn't matter whether you move adjacent to, or across from, the initial mounting (clockwise or counterclockwise), but always be systematic and complete the entire project once begun.

In a longer poster (i.e.: an image of Michael Jordan) still narrow enough to fit within the confines of twice the platen width, tack in the center of one of the long sides (see Photo 5). This will be fed into the press first, then directly across from the initial mounting. Then move either right or left,



Photo 2: This 210M-X mechanical press has a release board protruding from between the platen and sponge pad. It will equalize the pressure at the bite point and protect the substrate from denting. The handle must be at a 45° angle to the table with release board and substrate inserted and resting in the closed position.



Photo 3: The arrow at left indicates the tacking point. Surface tacking rather than Z-method tacking is necessary when mounting in bites.



Photo 4: For a four bite image, tack where the arrow is shown. This quarter enters the press first.

always completing the bite across as you progress. As with stretching a canvas, always work from the center outward; it's much easier to ensure proper placement on the mount board as well as pressing the air from the center to the outer perimeters.

Whether mounting or laminating, overlap each bite as much as possible to prevent tunneling of unmounted materials (see Photo 6). This technique also helps prevent the denting of soft boards.

Mounting is Step One

Though mounting and laminating can be done at the same time when preparing to laminate an oversized poster or photo, the artwork should be mounted first rather than attempting to do it all in a single step. This prevents the possibility of anything slipping during the process, and will therefore save on potential frustration and/or costly mistakes. Mount the poster with breathable tissue adhesive just a little larger than the poster; then cut the laminating film just larger than the adhesive. In turn, both are larger than the substrate.

Floating the art and laminating film in the center of the chosen substrate will allow for less time wasted during the preparation and final fitting of the project. Also if using foam board as a substrate, by working larger than the desired size there will be no crushed or compressed edges once the poster art is trimmed to fitting size. If the art is to be trimmed down, the materials are sized smaller than the board.

If all of the adhesive is not covered by the film, the sponge overlay foam will stick to the adhesive when mounted. This will cause no damage to the poster since the foam residue will be stuck only to the exposed adhesive on the exterior edge meant to be trimmed away. However, the foam will be damaged and unusable for another project of that same size. The foam should be cut down into smaller pieces for smaller jobs. As with release paper, any defects, dents, or divots in the foam may be texturally transferred to the film during the next project and will appear as a line or dot of a different texture.

Oversized Film Application

Applying the film to a large image can be tricky, but the ability of the vinyl laminate to be repositioned will assist in the process. The tacky nature of the film with the liner removed also assists in the application.

Once the poster has been mounted and the film cut to size, peel back the first few inches of the release liner on the

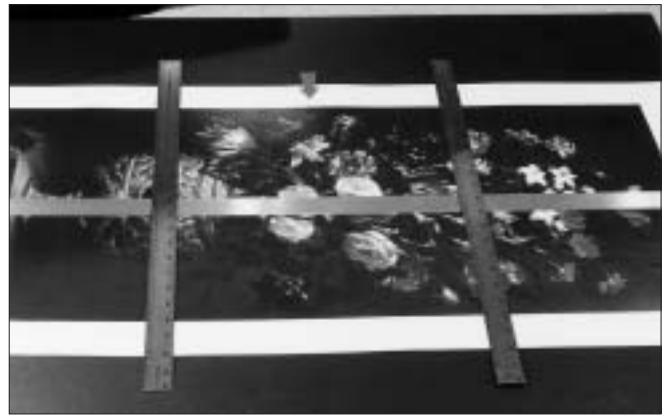


Photo 5: For more than four bites, tack at center side. Bite first at this point, then move directly across for the second bite. Work from the center toward the outer edges as when stretching a canvas.

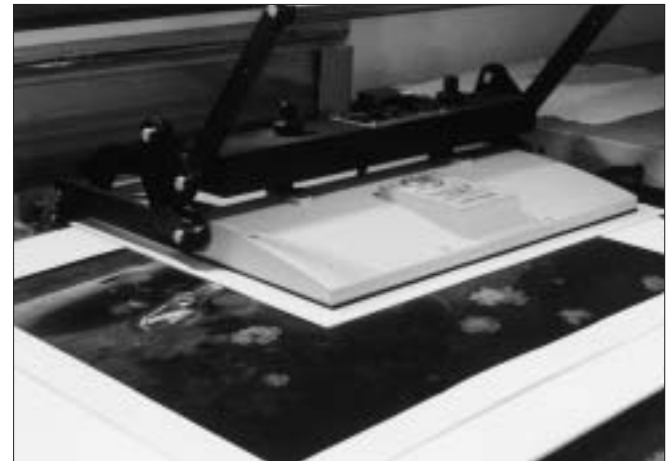


Photo 6: Whether mounting or laminating, overlap your bites as much as possible to prevent tunneling of unmounted strips. This also helps prevent denting.



Photo 7: Once the poster has been mounted and the film cut to size, peel back the first few inches of the release paper to expose the tacky adhesive of the film for positioning on the poster.

back of the laminate to expose the tacky adhesive of the film for positioning on the poster (see Photo 7). The larger the print or poster being laminated, the wider the strip of film should be folded back. On an oversized 40"x60" poster to be mounted and laminated in a large vacuum press, it is best to expose five to six inches of film to better hold the film in place while removing the release liner.

Square up the laminate for removal by lining up the bottom of the film with the bottom edges of the poster, making certain all adhesive is covered and the film is properly aligned. Then slide your hand across the surface of the film from bottom to top and press the tacky exposed edge of the film into place. The film is stuck to the short end of the print, not the longer side during application.

Reach under the film and grasp the release paper and with two hands, pulling it towards the bottom end of the board (see Photo 8). Do not pull the release liner from the center only, as the film has a tendency to trough, creating permanent damage creases in the film surface. These will not disappear during mounting.

Another way to remove the liner is to roll it onto a cardboard tube as it is pulled from beneath the laminate. Once the release paper has been totally removed, the laminate may be smoothed by carefully lifting the film and letting it gently roll back down in place.

Laminating in Bites

Once the laminate is sized, perforated (if necessary), and positioned, it is ready to mount. The featured project in Photos 9 and 10 is a laminated showboard for an office at a local middle school. As the vinyl is being applied over small nonporous photos, it has been perforated prior to aligning it onto the project. Being made of vinyl, laminates react by bubbling when they come in close contact with a heat source.

Photo 10 illustrates the bubbling nature of the film after completion of the first bite. Since films shrink when mounted, these bubbles will all smooth out nicely during the second bite, as witnessed by the completed upper half of the project in the top right half of the photo. The same rules apply when biting laminates as when mounting. Overlap each bite as much as possible, beginning at the center and working to the outer ends.

Press Time and Temperature

Though laminating times are often suggested at five to seven minutes for a mechanical press, the most common



Photo 8: Pull the release liner from the tacky laminate after it has been aligned by pulling the liner from beneath the laminate and rolling it onto a small tube or PVC pipe. This prevents large sheets of release paper from flailing around and getting in the way.



Photo 9: The right half of this laminated project for the local middle school has already been laminated using the two bite method, making it transparent. The left half is ready to be placed in the press for completion.



Photo 10: The left half of the project, after the first bite, shows how the laminate reacts to nearby heat by rippling. This will shrink and laminate smooth when placed into the press for the second bite. Rolling hills like this will always smooth out during bonding.

error is not leaving a bite project in the press long enough. Regardless of manufacturers' suggestions, if a film has not been under heat and pressure long enough, it will appear slightly cloudy or show signs of silvering.

Successive bites can then show clearer bands of mounted laminate where the overlapping of bites has occurred. It is also important that each bite be left in the press for the same amount of time or the finish of the film can show the bites.

Generally, I find more consistent success when using average laminating times of 10 minutes per bite with a small mechanical press. As with any mounting project, you can always place a job back into the press for additional laminating time if any of the above results occur.

If you need to place it in for a few more minutes it must be placed in for the initial time plus the additional minutes (ex: first 5 minutes + 3 minutes = 8 total minutes for the

second mount). Since most of these projects will eventually turn out beautifully even if placed into the press three times to get it right, it will ultimately reinforce leaving it in the press long enough the first time.

Temperatures for laminating will vary between 180°F to 215°F. I first began using laminates when they were suggested at 225°F. Since foam board will actually melt rather than compress at 230°F, it is better to turn the temperatures down a little. I still laminate most things at around 220°F.

The Bottom Line

Laminating in bites in a smaller press has its pros and cons. Since general maintenance of any mounting equipment should already be addressed, the pressure adjustments will most likely not be necessary. There is more time used in this process (compared to one-step laminating in a vacuum press large enough to accommodate the art).

Consider the additional shop time used in biting laminates and charge accordingly. If adequate money is not being brought in for the project, maybe it should not be offered. If that's the case, it should be your choice and not because it "can't" be done.

The bottom line is that if an image can be mounted, it can be both mounted and laminated in bites. If size restrictions, perforations for non-porous items, and all TTPM elements are correctly monitored, there should be no fear of unlaminated tunnels of material, silvering, dents in the substrate from press pressure, or air bubbles. Laminating large posters is no different than small posters; it's just more money in the bank. ■