# **Mastering Mounting: Understanding Mounting Basics**

#### Chris A. Paschke, CPF GCF

#### West Coast Art & Frame Expo, Las Vegas 2025

"In 1972 mounting was simple... paper, photos and fabrics. Heated vacuum presses did not yet exist in framing, and spray adhesive, corrugated cardboard and masking tape were state-of-the-art.

Today we have paper and coated paper; photos and digital photos; fabrics and dye-sub canvas; and that's just tip of the iceberg.

Welcome to mounting in the 21st century!"

- Chris A. Paschke, CPF GCF

## Mounting Review

**Noninvasive Methods** Natural Starch Hinges **Kozo Backing Cold** Alternatives Edge Strips, Pockets Mylar/Encapsulation Sink Mount **Static Mount** Velcro Mount Lacing HA Reversible Board

**Invasive Methods** HA Dry Mounting HA Roller Laminators Cold Mount Cold RLs Vacuum Frame **Commercial Wet Glue Commercial Paste** Spray Adhesive Pressure-sensitive Manual Applications Wet, PSA, Spray

## Invasive Mounting Longevity

HA Dry Mounting HA Roller Laminator Cold Mount with Machine Cold RLs Vacuum Frame **Commercial Wet Glue Commercial Paste** Spray Adhesive **Manual Applications Commercial Wet Glue Pressure-Sensitive** Spray Adhesive

Adhesive Methods/Choices Used to be based on cost, now is based more on art. 80/20 Rule

80% Preservation vs. 20% Invasive80% HA Boards vs. 20% Tissues

It will depend upon your individual market, but could be 70% - 20% - 10%

### Condition Reports

- Paper
- Photography
- Digitals
- Textiles
- Paintings

CONDITION REPORT (from The Mounting And laminating Handbook, 3rd Edition) Digital Print on Paper, Textile or Rigid Media Photo, Poster Print, Gidée, LE Canvas Liquid or Dry toner: Electrophotographic / Electrostatic Thermal transfer: Dye sublimation / Dye transfer / Dye diffusion Aqueous Inkjet: Thermal / Piezo / Phase change (solid wax) / Continuous flow Solvent Inkjet: Thermal / Piezo

Client			
Address			
City	State		Zip
Phone	Fax	Email	
Artist			
Title/Subject			
Declared Value			
Size Height	Width	Thickness	Weight
Printer	Medi	ium / Technology	
Substrate		Micro porous	Swellable
Inkset (if known)	Surface Coat		Other
Abrasion Bulge Cockling Crease/Fold	Foxing Indentation	Perimeter Damage Previous Hinges Previous Repairs Puncture	
Bulge Cockling Crease/Fold Fading/Color Shift	Foxing Indentation Ink Smears Moisture Damage	Previous Hinges Previous Repairs Puncture Stains Tears	2
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Bulge Cockling Crease/Fold Fading/Color Shift Other Conservator consultation will b Conservator Report Notes The client has been informed and agrees to the methods recommended	Foxing Foxing Indentation Indentation Moisture Damage Damage for equired. Yes for equired. Yes for equired. Yes for equired. The second structure of the need for specific framin commended.	Previous Hinges Previous Repairs Puncture Stains Tears No No ns on this form. ng requirements	Yes No

## Condition Reports\*

- 1. Art on Paper or Document
- 2. Photography on Paper or Plastic Media
- 3. Digital Print on Paper, Textile or Rigid Media
- 4. Needleart and Textile
- 5. Paintings on Stretched Support

Always fill the report with your customer.

\*Appendix: The Mounting And Laminating Handbook, 3rd Edition

## Work Station

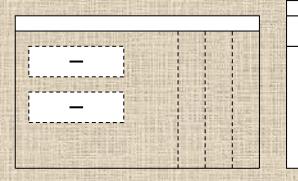
- Equipment Placement
- Ergonomics
- Keep away from cutters and saws
- Lighting need to see the dirt

Clean area...clean process

# Work Room Layout

PREPARATION TABLE

HOT VACUUM PRESS



COOLING TABLE
Glass Weight
I

Optional vertical storage and drawers.

Opening is level with tabletops, with optional storage shelf. Optional cabinet and shelf storage.

## The Elements of Mounting - TTPM

TTPM is required procedure TTPM applies to ALL mounting methods TTPM is there to help TTPM will help locate the problem How much time was allowed? What temperature was used? Was it weighted (pressure) a full 24 hours? Was **moisture** properly controlled?

# TTPM

### **Time** - Correct time is <u>always</u> required Tack time, Open time, Draw time, Dwell time



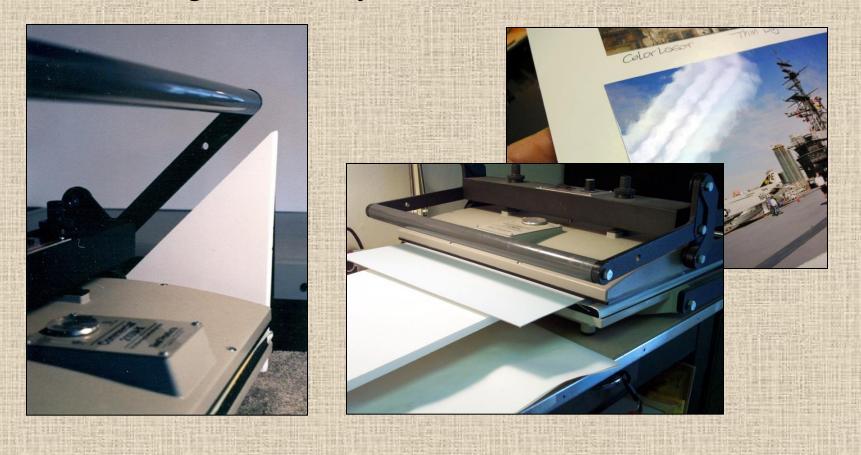


### **Temperature** - Storage, equipment and glue Even Wet and Spray are 60F - 90F degrees



# TTPM

### **Pressure** - Good technique and adjustments Weighted to Dry, Cure and/or Cool





### Moisture - Required control in all methods



# Wet Mounting



**TIME** *Drying time* is the time required for total cure, 3-24 hrs.

### TEMPERATURE

Extremes of heat, humidity, or cold lessen permanency.

**PRESSURE** Plate glass increase bonding, but a vacuum frame is best.

**MOISTURE** Too much moisture may absorb into the art. Vacuum frames speed bonding time.

## Wet Mounting

### **Pros** Starch lasts the test of time...scroll mounting Commercial glue for manual or cold frame Reactivates with heat

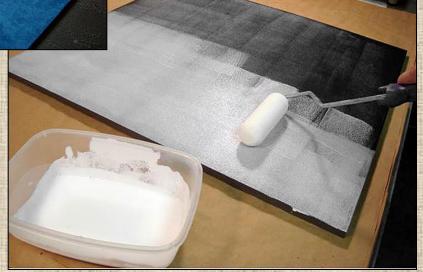
**Cons** Clean up More time intensive







### Commercial Adhesive



### Traditional Starch



# Commercial Wet Glues

Polyvinyl acetate (PVA) white glues are permanent. Ethylene-vinyl acetate (EVA) is reversible.

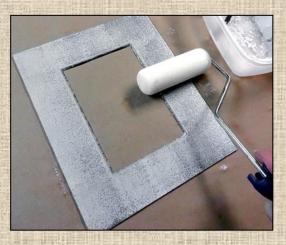
All Purpose = light for paper, RC photos Brands = Décor 610, Lineco Neutral pH **Paste** = heavier for posters, RC photos, fabric, vinyl Brands = Décor 980, LION 10554, YES! **Vacuum Mount** = bonds to wood, Masonite, MDF, foam... Brands = Décor 3649, LION 6201, Fredrix Lamin-all... **Fabric** = bonds fabrics to matboard, liners, MDF... Brands = Franks Fabric Glue **Raphael Miracle Muck** Décor 1340

# Wet Mount Application

### Tips

- Sponge rollers apply smoother layers.
- Apply layer, apply second layer in opposite direction.
- Mist back for print to expand fibers.
- Align print to the substrate across the top edge.
- Rub from center to outer edges.
- Dry under weight for 4-24 hours.
- Or use cold vacuum frame.

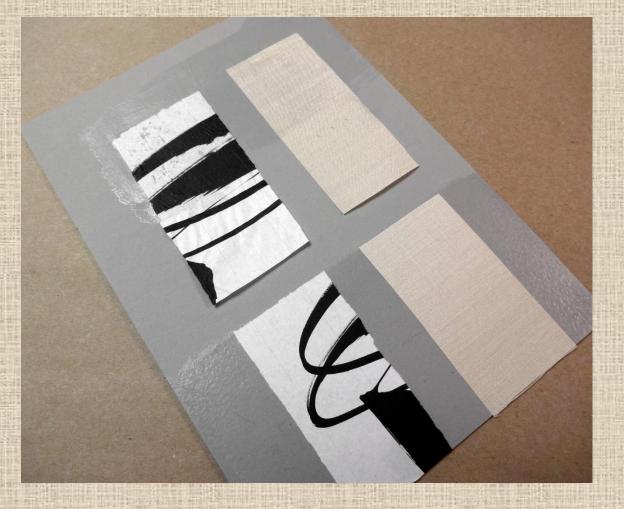




# Wet/Dry Application

Adhesive absorption is visible in wet mounted upper two.

Lower samples were wet/dry mounted preventing absorption.



## Wet/Dry Application

### Tips

- Apply two coats, let each dry.
- Set press between 180°F-190°F.
- Align the fabric and press to hold.
- If wrapping a window, refit fallout.
- Insert into heated press between release papers for 2-5 minutes depending on the substrate, size, fabric, and press.





# Spray Mounting

#### TIME

*Open time* is the window for mounting, 3-10 min. *Bond time* is the curing time for permanent bond.

#### TEMPERATURE

Most manufacturers have a suggested temperature range.

#### PRESSURE

A vacuum frame is recommended for maximum pressure.

**MOISTURE** Condition the art and substrate to the same environment.



## Spray Mounting

**Pros** Inexpensive Ease of use

**Cons** Health issues Messy Special equipment



# Spray Mounting

Apply spray then rotate substrate 90-degrees

Begin off the left edge and continue past the right. This may be done in one continual motion or in separate left to right passes across the substrate.



## Pressure-Sensitive Mounting

**TIME** Maximum bond achieved after 24 hrs.

#### TEMPERATURE

The warmer the materials, the more aggressive the bond. Extremes of heat and cold can affect the long-term bonding.

**PRESSURE** A weight or vacuum frame should be used.

**MOISTURE** Damp materials will not bond.



## Pressure-Sensitive Mounting

**Pros** Low, Medium, High Tack Repositionable Easy to Use Variety of Choices – film and carrier

**Cons** Repositionable Could crawl or dry out over time



### Pressure-Sensitive Adhesives

#### Films

PMA (3M Positionable Mounting Adhesive)Gudy 870 (Gudy O - no carrier)Crescent Perfect Mount (clear carrier)Gudy 831 (Gudy V - long fiber sheer carrier)

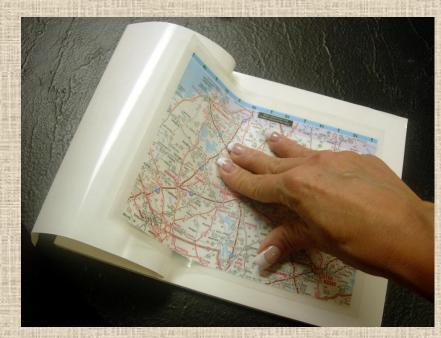
#### Boards

Crescent Perfect Mount Bainbridge SA Gilman SA HT KoolTack InstaMount Gilman Resilient Gilman Resilient Align (repositionable)









- Remove top liner
- Position on board
- Cover with liner
- Burnish from center
- Weight to cure

# PSA Mounting for RL

Commercial substrates: (top to bottom)

- Acrylic
- 1/4" Gatorboard
- 1/8" Gatorboard
- Dibond (ACM)
- 1/8" Hardboard
- 3/8" Coated Hardboard



• 1/2" Resilient® Soft Touch Board

# Dry Mounting

#### TIME

*Dwell time* is that required to activate and create the bond. Average vacuum press 4 min, mechanical press 1-2 min

#### TEMPERATURE

No standard temperature for all adhesives, about 130F-190F

#### PRESSURE

The force that compresses air from between bonding layers. A mechanical press is manually set, a vacuum is automatic.

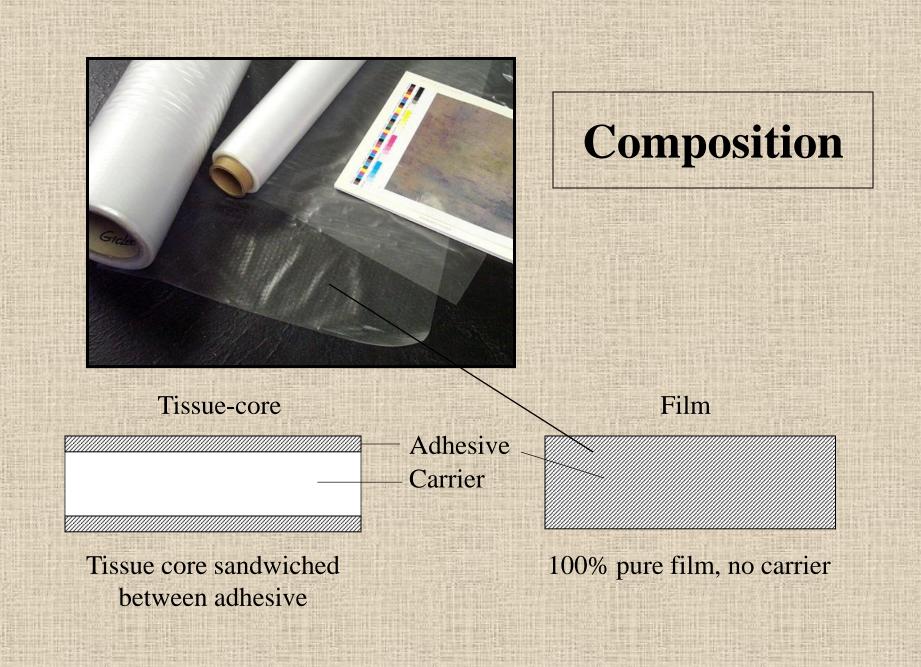
#### MOISTURE

Steam is created at 225F, predrying may be required. A vacuum draws moisture out automatically.

## **Adhesive Characteristics**

- **Composition** Tissue-core carrier Film (no carrier)
- Type of Bond Permanent vs. Removable
- Porosity Breathable vs. Non-breathable
- Acidity Level Buffered vs. Unbuffered





# **Type of Bond**

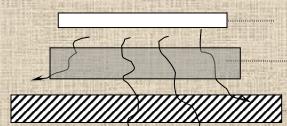
#### Permanent

Tear Strength vs. Longevity Bonds in the press at Temperature Solvent Removal **Removable** Reactivates under heat Bonds as it Cools

**Removable is NOT Reversible** 



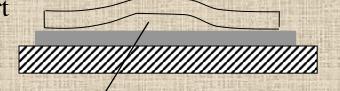
## Porosity



Nonporous art Porous adhesive Substrate

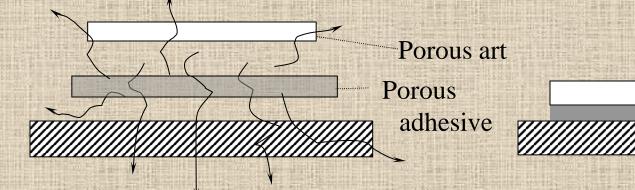


Nonporous art Nonporous adhesive



Air trapped between nonporous surfaces

### Proper Bond



## **Acidity Levels**

- Adhesives are inert
- Carriers are buffered



### Temperature - HA Foam Boards

#### **High Temperature**

Traditionally noted as **180°F-200°F** Most are permanent – bond in press Bond 1-3 minutes mechanical, 4 minutes vacuum after draw

- Crescent HA Fome-Cor 165°F-170°F
- Bainbridge SpeedMount 180°F-190°F



#### Temperature - HA Foam Boards

Medium Temperature = 150°F-160°F <u>+</u> Many are removable - bond outside press under weight Bond 30 seconds mechanical, 1-3 minutes vacuum after draw

- Bainbridge HAF (Heat Activated Foam) 160°F-180°F
- KoolTack Drymount Foam -160°F
- KoolTack ACM 160°F-165°F
- Gilman InSite HA Foam -160°F



#### Temperature - HA Foam Boards

#### **Low Temperature = 130°F**

Permanent, stable and inert Bonds 30 sec -1 minute mechanical press, 2 minutes vacuum <u>Safe for all digitals</u>

• Gilman MountCor Acid Free -130°F

• Gilman MountCor Canvas Acid Free -130°F



#### Temperature - HA Foam Boards

**Reversible Board = 150°F-170°F** Designed to bond preservation items Adhesive rubs off back of art after removal

• KoolTack 100% Reversible -150F-170F



#### HA-PSA-Film-Wet Adhesives and Comparisons 2024-2025

Board This chart is a combination of manufacturers' suggestions, claims and tested mounting results between 2006-2008. Not all new release products since 2011 have been tested. Copyright © 2011 Chris A. Paschke, CPF GCF Updated Copyright © 2014 Chris A Paschke, CPF GCF Updated Copyright © 2024 Chris A Paschke, CPF GCF	Types of Art											Digitals									Board Info											
	Lightweight Porous Paper	Coated Paper-mechanical	Coated Paper-vacuum	Heavy or Textured Papers	Asian Papers Heavv Watercolor Paper	Original Art	RC Photo-mechanical	RC Photo-vacuum	RA-4 Photographs	Creative Applications	Fabrics / Textiles Raw Canvas	Digital Canvas	Elecrtrophotographic Copy	Electrostatic / Laser Copy	Dye Sublimation	Thermal Transfer	Thermal (dye) Inkjet	l nermal (pigment) inkjet Diezo Inkiet	Digital Canvas	Time – after draw (actual)	Temperature	Dominant	Permanent	Reversible / Preservation	Cure or Cool under weight	Neutral pH or stable & inert	Orange peel	High Density	Oversized Mounts	Manual Rollers - cold	-	Mechanical
Heat Activated Film & HA Boards													N	N			N															
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Heat Activated Foam (HAF)			X	x >	<	2	X				хх	x			Х	х		x >	( X	1-3m	F175-19		X		X							XX
Crescent Heat-Activated Fome-Cor			XX				X				XX				X				( X	1.5-3m			(					_				XX
Designs Ink Film 4000	X				< X						хх									1-4min	F180-20	0	X		Х	X			Х			XX
Gilman InSite Heat-Activated Foamboard	X	Х	X			2	X								Х	Х		XX	(	15s-1m	F160		(			X						XX
MountCor			X				сх						X				X	хх	Χ	30 sec	F130		(			Х						XX
MountCor Canvas			X				( X			2	хх	X								1-3m	F130		(									XX
Kool Tack Preserve 100% Reversible	X	Х	X	x	x	X	X	Х	Х									x		15s-30s	F150-16	50		Х	Х	X	X					XX
Drymount Foamboard	X	X	X	x )	x x	1	X	X	X		x	X			Х	Х		XX	(F	15s-45s	F150-16	50	X		Х						X	XX
ACM Competition Plate	X	Х	X	x >	x x		Х	X	X						Х	Х		XX	(	15s-45s	F160-16	5	X		Х		X				X	XX
Pressure-Sensitive (P-S) Boards		NA	NA		NA	NA	NA	NA												LT	HT R											Т
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Crescent PerfectMount Foam	X			>	<			1	X								X			X	X				X					( X		
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PSA Films (used with substrates of choice)						NA														LT	HT R			[								
Crescent Perfect Mount Film (flat, 2 release liners)	x			>	<				Х	х			X	Х	Х	Х	XX	х х	F	X	X		X		Х	Х			)	< X		
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Gudy 870/Gudy O (rolled, no carrier)	X	-		>					х				x				X				X		(			X				< X		
PMA (rolled, no carrier)	X			>					Х				x				x			X			X			X				< X		
Wet Glue		NA	NA			NA	NA	NA												M	W/D C	/			NA		NA					
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Decor Vacuum Mount Adhesive #1340 (PVA)	X	-	-		< <u>x</u>	1.			X			X							XX		X		_	-	-	X			X			
Frank's Fabric Glue (PVA)	x	_		x )			-		X				-		-				XX	x	X			_	-	X	$ \longrightarrow $		x )			x

Legend: NA=Not applicable; F=Fail; x=Moderate bond; X=Good bond; X=Excellent bond and tear strength; N=Do not apply heat over 130°F LT=Low tack; HT=High tack; R=Repositionable; M=Manual application; W/D=Wet/dry application (200°F/2-5 min); CV=Cold vacuum application

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### Substrate Selection

Controls Orange Peel Standard Thicknesses Up to 8x10" 8x10"- 16x20" 16x20"- 32x40"

32x40" - 40x60"

40x60"- 48x96"

4-ply Mat Board, X board
1/8" Foam, 2X board
3/16" -1/2" Foam, 3X board
Honeycomb Falconboard
1/2" Foam or Gatorboard
Hardboard, MDF
3/4 " Honeycomb Panels Tycore, Hexamount...

# Countermounting

#### Allows for use of thinner substrate



RC Photo on 2 ply

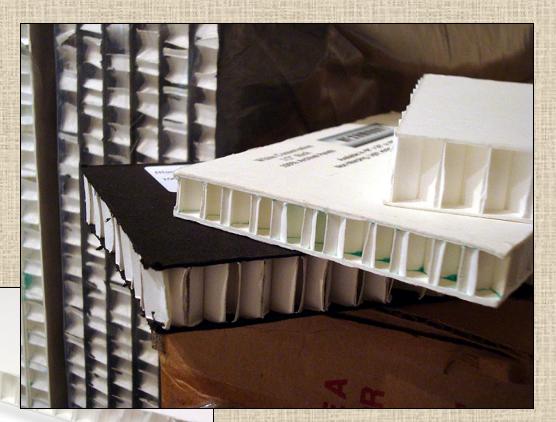
Countermounted



#### Print on 2 ply and 4 ply rag boards

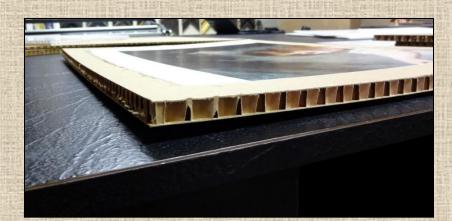


# Honeycomb Panels



#### Tycore, Hexamount

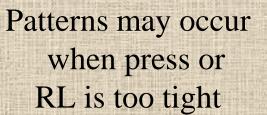
Falconboard Hexacomb, Gilman Eaglecell



### Warping occurs when boards are too thin for image size.











### **Release Materials**

#### **Silicone Coated**

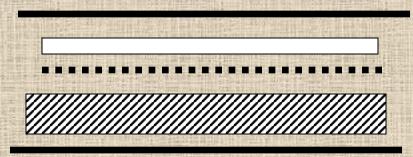
- Clear Release Film Mylar
- Double-Sided Paper Lightweight
- Single-Sided Lightweight Liner paper
- Single-Sided Paper Heavyweight
- Release Boards Commercial
- In-house Release Boards



#### **Release Materials**

#### Release envelope

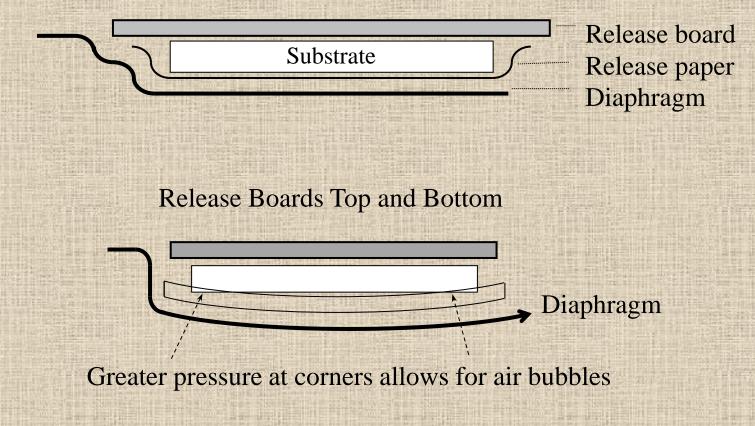
Folded release paper allows for easy handling of small projects and those with loose items.



Release material Artwork Adhesive Substrate Release material

#### **Release Boards in Vacuum Press**

#### Release Board Top Only



# **Daily Maintenance**

Vacuum Presses (control TT, PM automatic) Morning - run once empty and closed Evening - run once open Mechanical Presses (all TTPM manual) Check pressure, temperature All Equipment Clean platens Change release materials every 50 hours

### Pressure - 45 Degree Pattern



Score 20x20" rectangle diagonally

20"

20"

Fold into 45degree self-standing angle



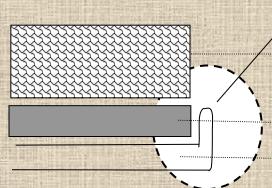
#### Arm too low, too loose

Always adjust press with all layers inside to insure proper pressure

Arm too high, too tight

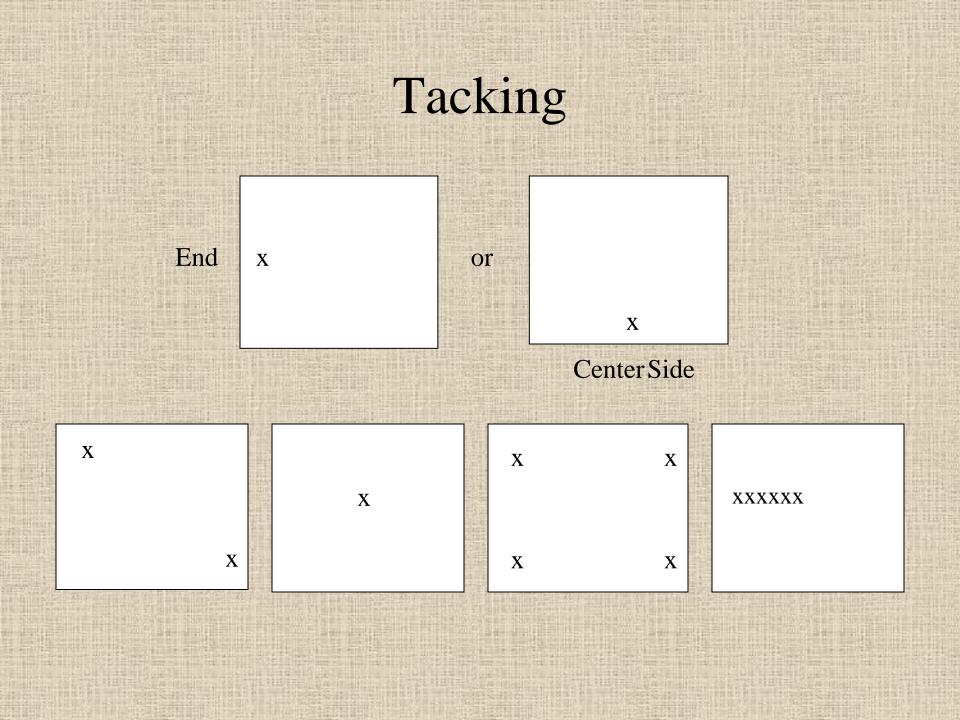
### **Mechanical Press Spacers**

0 shims = 3/16" foam substrate 1 shim = 1/8" foam 2 shims = 4-ply mat board 3 shims = no substrate is used

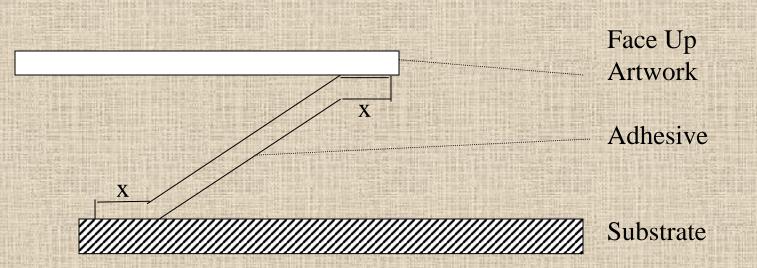


Sponge pad

Masonite board Metal press base



### **Z-Method Mounting**







### Solvents





Overwhelmed yet? Some problems still not covered? Other Paschke mounting classes at WCAF 2025

Mastering Mounting: Sensitive Items Saturday, 9:00-11:00pm

Mastering Mounting: Creative Mounting & Laminating Sunday, 8:30-11:00pm

Mastering Mounting: Handling Digitals Sunday, 12:30-2:30pm

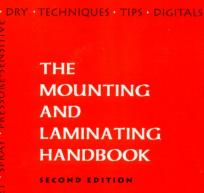
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SPRAY

WET

TPM

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THIRD EDITION

By Chris A. Paschke, CPF GCF

COLD MOUNTING DIGITALS TIPS

FREE w/other two (in class only)