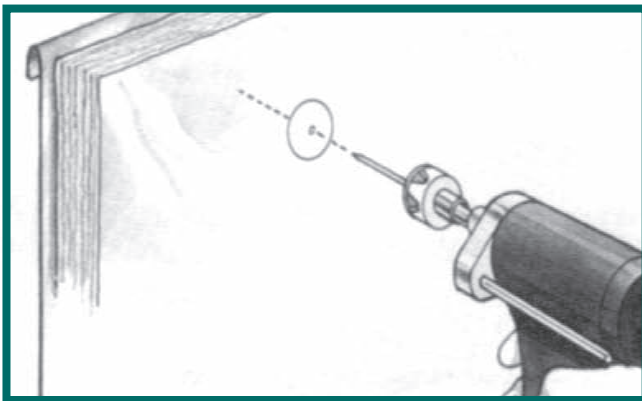
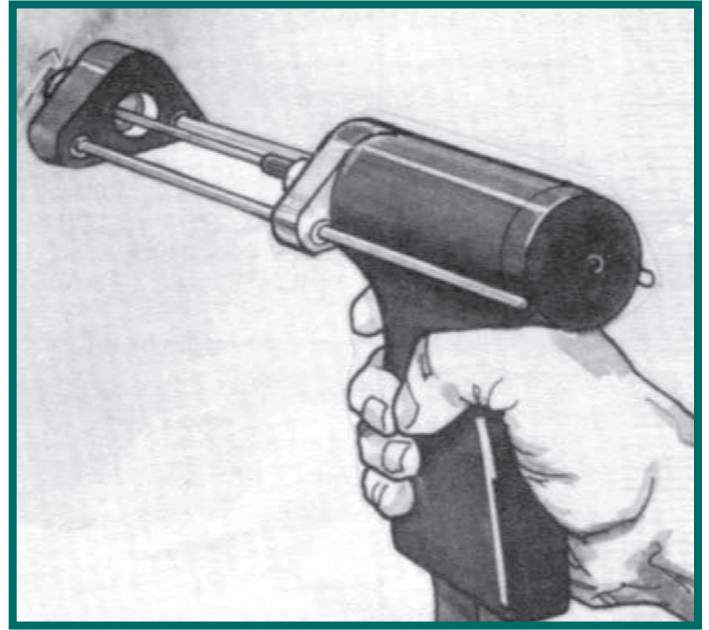
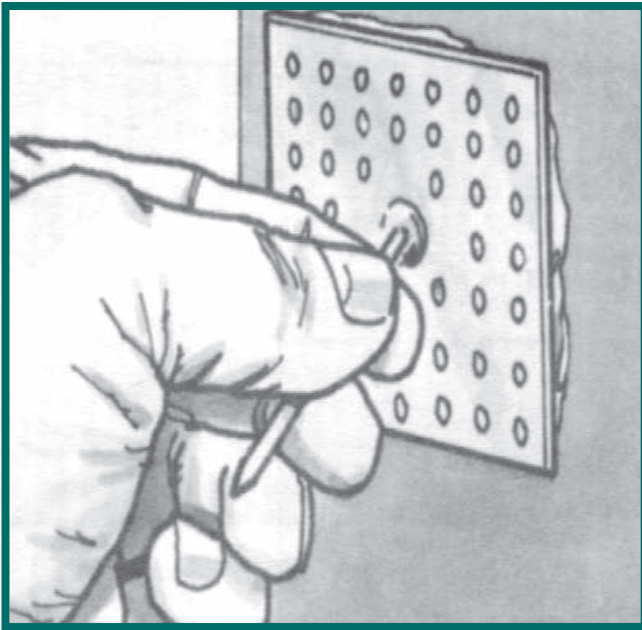




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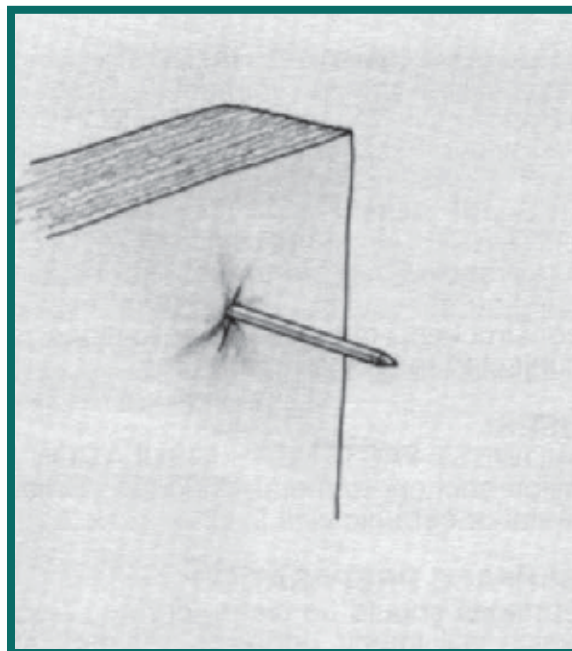
## **GUIDE TO INSULATION FASTENING**



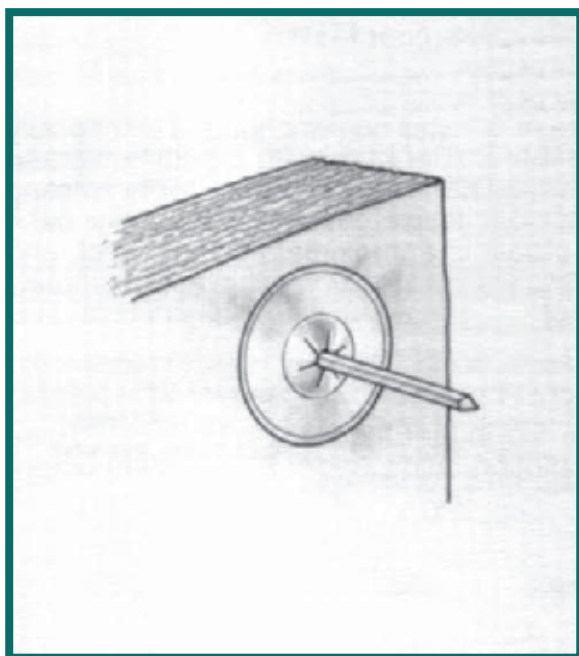
## APPLICATION OF WELD PINS



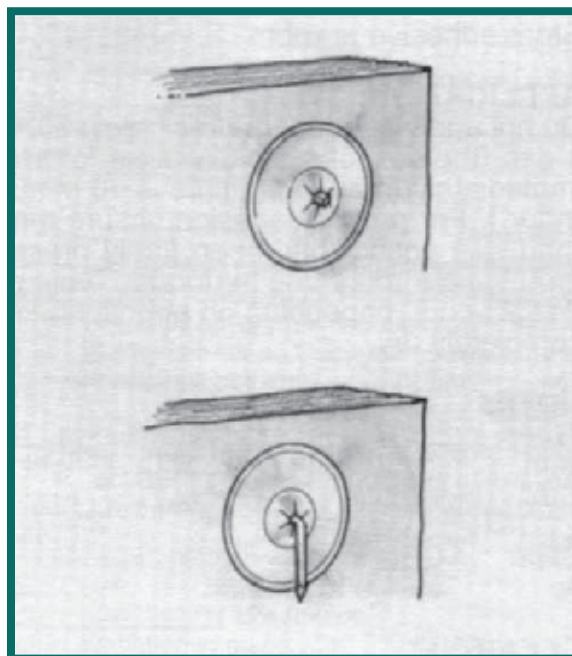
**1. WELD PINS IN PLACE.**



**2. INSTALL INSULATION ON PINS.**



**3. PRESS WASHERS ON PINS TO SECURE INSULATION.**



**4. EITHER CLIP NAIL OFF AT WASHER... OR BEND NAIL OVER.**



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**HINT:** MANY INSULATORS PREFER WELD PINS 1/2" LONGER THAN INSULATION THICKNESS.

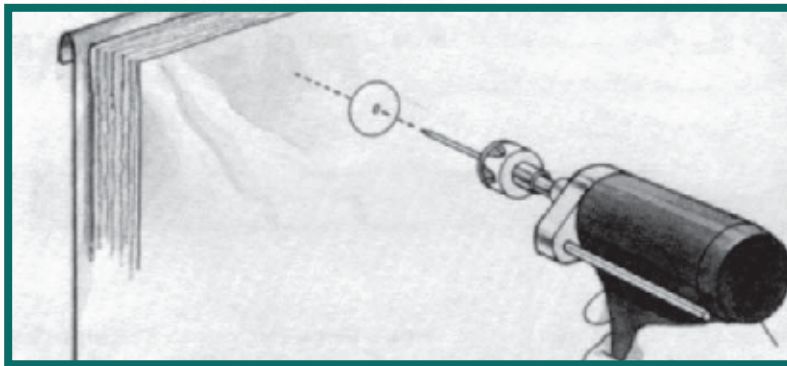
WELD PINS ARE AVAILABLE IN MILD STEEL, STAINLESS STEEL AND ALUMINUM.

SPECIAL WELD TIPS ARE AVAILABLE TO WELD THROUGH RUST OR PAINT.

## APPLICATION OF CUP HEAD PINS

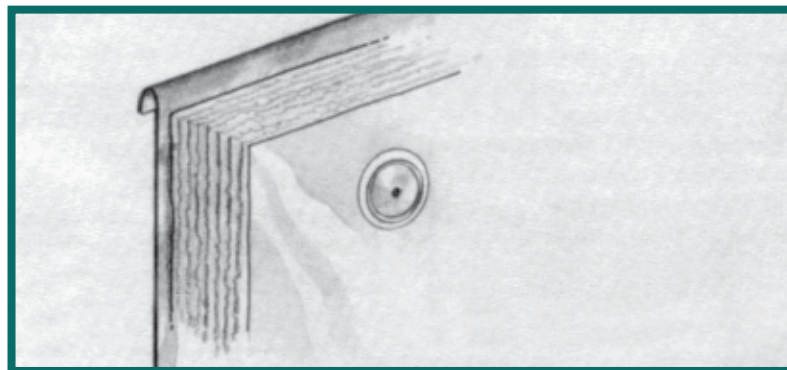


**1. POSITION INSULATION.**



**2. PRESS CUP HEAD PIN THROUGH INSULATION.**

NOTE – AN INSULATING PAPER WASHER IS REQUIRED WHEN WELDING THROUGH FOIL-FACED INSULATION.



**3. WELD IN PLACE TO COMPLETE INSTALLATION.**

**HINT:** MANY INSULATORS PREFER CUP HEAD PINS BE 1/8" LONGER THAN THE INSULATION THICKNESS, DEPENDANT UPON DENSITY OF INSULATING MATERIAL BEING ERECTED.

APPLY ONLY 1/8" TO 1/4" OF GUN PRESSURE TO CUP HEAD AT TIME OF WELD FOR PROPER BURN-OFF AND GOOD WELD QUALITY.

CUPHEADS ARE ALSO AVAILABLE IN STAINLESS MATERIAL.



**MIDWEST  
FASTENERS, INC.**

Dayton, Ohio

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## MIDWEST Fasteners

### IHA-177 INSULATION HANGER ADHESIVE

#### **Product Data:**

MIDWEST Fasteners HANGER ADHESIVE is a high strength, heavy-bodied adhesive, specifically formulated for adhering anchors for hanging insulation.

IHA-177 HANGER ADHESIVE bonds metal and nylon anchors to metal, concrete or masonry surfaces. The product can also be used to install metal or ceramic wall fixtures tile applications.

MIDWEST Fasteners HANGER ADHESIVE is also available for use as a general-purpose construction adhesive in applications requiring a high strength bond, or in applications subjected to high temperatures.

#### **Special Characteristics:**

- Excellent thermal shock resistance
- High bond strength
- Water resistant
- Immediate grab
- Mildew resistant
- Non-slip formula

#### **TYPICAL PHYSICAL PROPERTIES AND TECHNICAL INFORMATION:**

**Base:** Thermoplastic Rubber

**Type:** Solvent

**Solids Content:** 64%

**Color:** Light Brown

**Weight/gallon:** 9.0 lbs./gal.

**Shear Strength:** Greater than 600 psi (AFG 01)

**Water Resistance:** Excellent

**Consistency:** Gun Grade Mastic

**Application Temperature:** 30°F to 120°F

**Extrudability:** Excellent (ASTM C 731)

**Service Temperature:** -30°F to 250°F

**Shelf Life:** 12 months

**Storage Temp:** Store at room temperature with cross ventilation.

**Clean-up:** Mineral Spirits, exercising safe practices

OSHA Class 1B liquid. Store per 29 CFR 1910, 106.

**Coverage:** 500-1000 anchors per gallon

**Flammability:** Flammable, Red Label

**Flash point:** (ASTM D 3828) -9°F

**Open time:** 15 minutes at 75°F and 50% relative humidity



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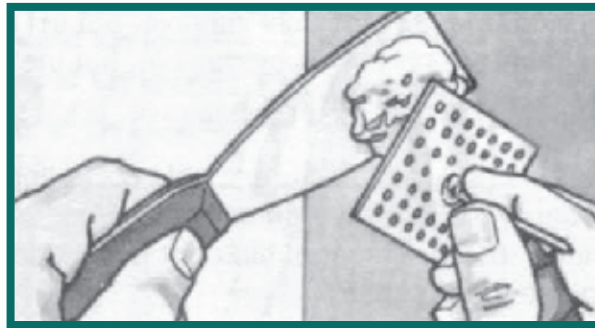
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## APPLICATION OF INSULATION HANGERS



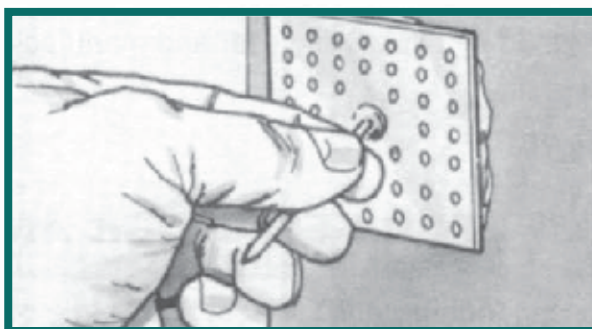
### 1. WIPE SURFACE CLEAN.

Anchor must be applied to a clean, dry, non-painted surface.



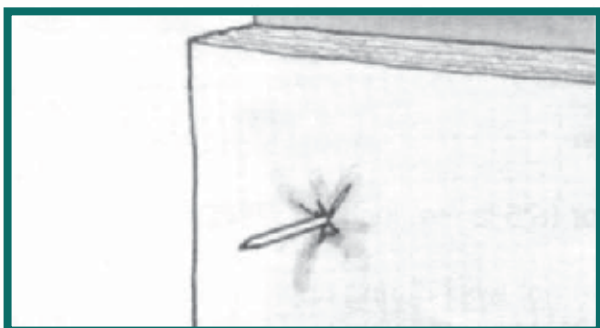
### 2. APPLY ADHESIVE TO ONE ANCHOR AT A TIME

Spread Anchor Adhesive onto the perforated base with a putty knife.



### 3. IMMEDIATELY STICK ANCHOR IN PLACE.

Press anchor into position with a twisting motion to assure an even spread of adhesive. The adhesive should protrude through the perforations & beyond the edges of the base.



### 4. INSTALL INSULATION.

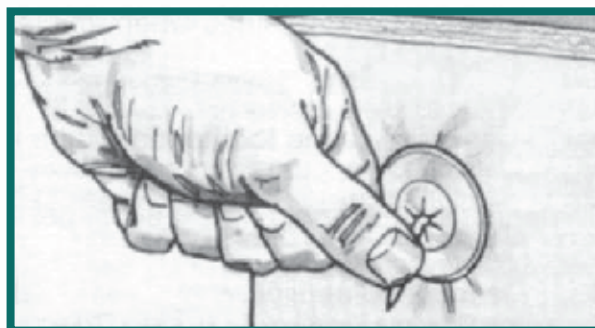
NOTE: ALLOW ADHESIVE TO DRY THOROUGHLY before hanging insulation, usually 24-72 hours. Drying times vary with temperature and with adhesive formula in use.

**LAYOUT:** MIDWEST RECOMMENDS INSTALLATION OF HANGERS ON 12-INCH CENTERS OR 1 (ONE) PER SQ. FOOT.

**HINT:** EXPECT 700-800 ANCHORS PER GALLON OF ADHESIVE.

UNDER HOT AND/OR HUMID CONDITIONS, ALLOW EXTRA DRYING TIME (CURE) BEFORE INSTALLING INSULATION.

USE OF ANCHOR 1/2" LONGER THAN INSULATION THICKNESS IMPROVES APPLICATION FOR MANY USERS.



### 5. SECURE WITH WASHER.

Secure insulation in place with a self locking washer and then bend over or clip off the nail.



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## **IMPORTANT NOTICE TO PURCHASER**

All statements, technical information and recommendations contained herein are based on facts we believe to be reliable, but the accuracy or completeness thereof is not guaranteed, and the following is made in lieu of all warranties, express or implied.

Seller's and manufacturer's only obligation shall be to replace such quantity of the product proved to be defective. Neither seller nor manufacturer shall be liable for any injury, loss or damage, direct or consequential, arising out of the use of or the inability to use the product.

Before using, user shall determine the suitability of the product for his intended use and user assumes all risk and liability whatsoever in connection therewith.

No statement or recommendation not contained herein shall have any force or effect unless in an agreement signed by officers of seller and manufacturer.

## **GUIDELINES FOR SELF-STICK ANCHORS**

1. Must be applied to a clean, non-porous surface, that is free of all oil, film, dust, rust, etc.
2. Not generally recommended on painted surfaces, drywall, nor ceilings of metal buildings.
3. Best results are obtained when ambient temperature is above 40 degrees F. at time of application.
4. Temperature range for the foam tape is from -20 degrees to +180 degrees F.
5. Loading should not exceed 3 lbs. per anchor (.75 lb./sq. inch).
6. Base must be applied with firm pressure. Do not twist during application. Do not remove release (backing) paper until ready to use.
7. Insulation may be applied immediately after bond is made.



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## APPLICATION OF SELF-STICK ANCHORS



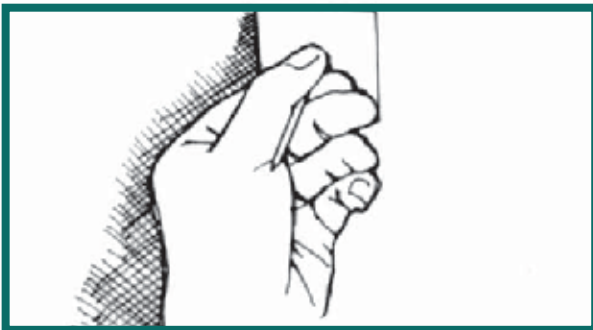
### 1. WIPE SURFACE CLEAN.

Anchor should be applied to a clean, dry non-porous surface.



### 2. PEEL OFF RELEASE BACKING.

NOTE: Double faced foam tape has a one-year active shelf life.



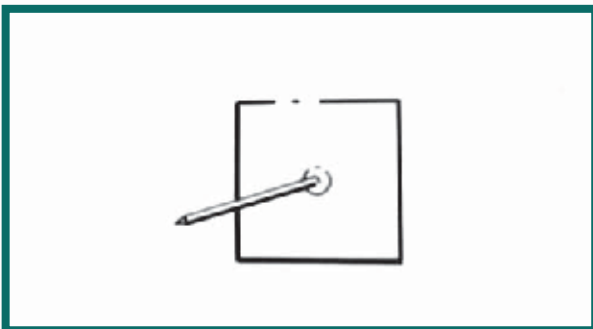
### 3. STICK ANCHOR IN PLACE.

Select location before contact with surface. Press firmly.



### 4. APPLY FIRM PRESSURE.

20 pounds of pressure should be applied all around the base of the anchor.



### 5. ALLOW TO STAND 15-20 MINUTES.

This will permit better adhesion to take place.



### 6. INSTALL INSULATION AND SECURE WITH WASHER.

Recommended load is 3 lbs. per anchor (.75 lbs./sq. inch maximum).

**HINT:** USE ANCHORS 1/2" LONGER THAN INSULATION THICKNESS TO IMPROVE INSTALLATION.

DO NOT "TWIST" ANCHOR DURING APPLICATION.

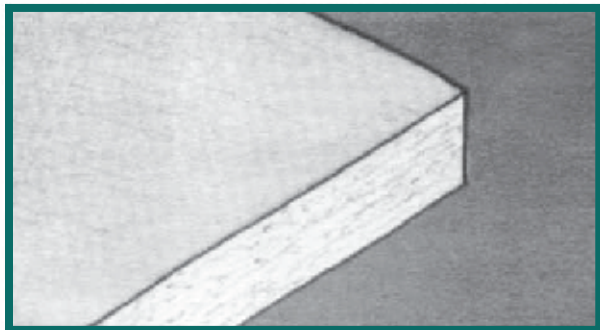
ASSURE APPLICATION TO A CLEAN, DRY, NON-POROUS SURFACE, OBSERVING ALL TEMPERATURE REQUIREMENTS OF THIS TYPE ANCHOR.



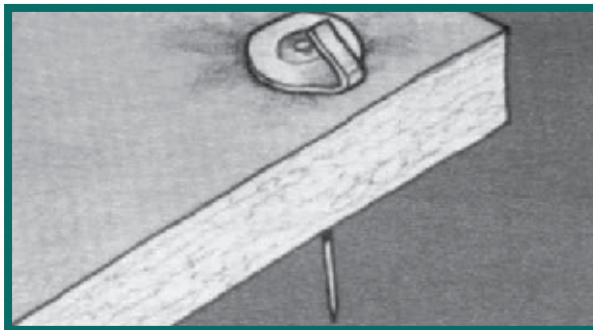
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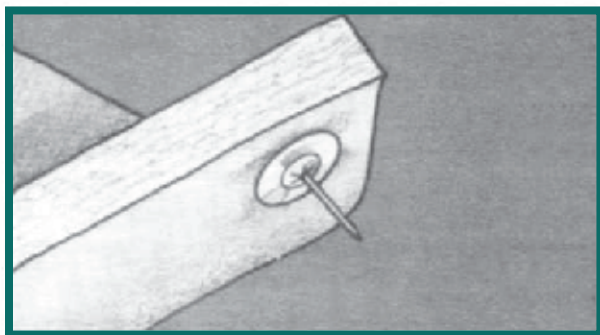
## APPLICATION OF LACING ANCHORS



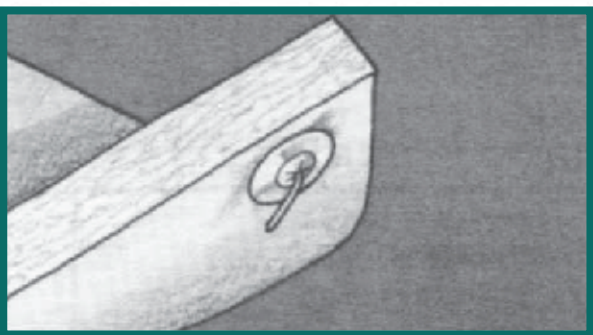
**1. PREPARE INSULATION COVER OR PAD TO BE FABRICATED.**



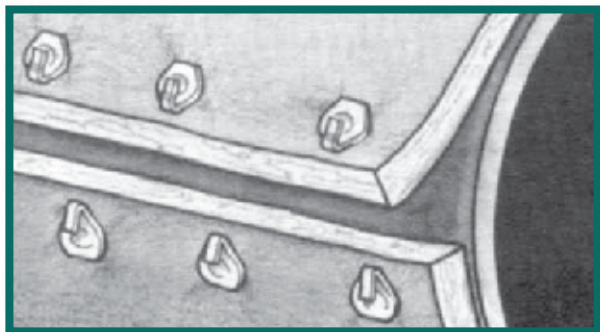
**2. PRESS LACING-ANCHOR THROUGH BLANKET.**



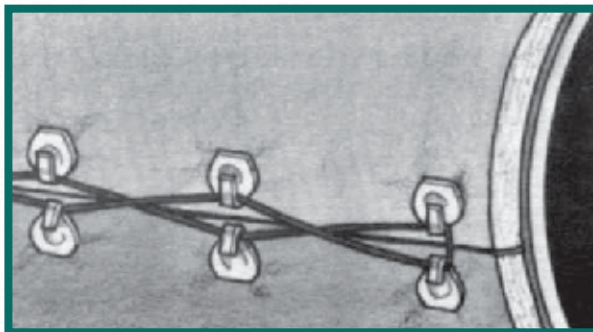
**3. SECURE LACING-ANCHOR WITH SELF LOCKING WASHER.**



**4. BEND OR CLIP-OFF NAIL.**



**5. INSTALL REMOVABLE FABRICATION.**



**6. SECURE COVER BY LACING THROUGH HOOKS WITH LACING WIRE.**



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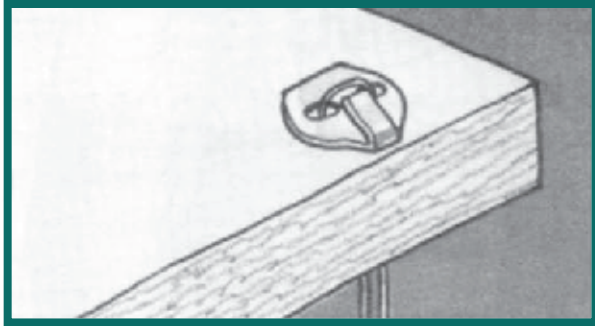
**HINT:** SOME USERS PREFER NYLON WIRE TIES FOR STEP 6 (WHERE APPLICATIONS PERMIT).

“QUILTING PINS” ARE ALSO AVAILABLE FOR THE OFF-SEAM AREAS OF REMOVABLE PADS & COVERS, AS WELL AS SLIM-STYLE, NARROW WIDTH ANCHORS.

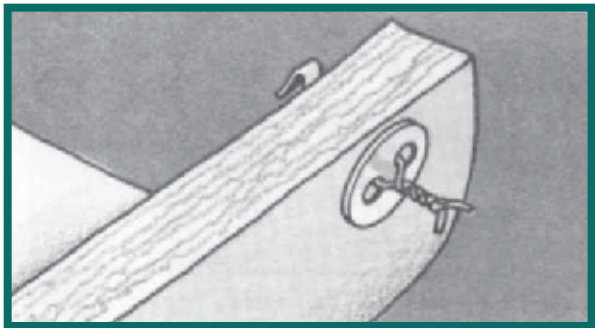


## APPLICATION OF LACING SYSTEMS

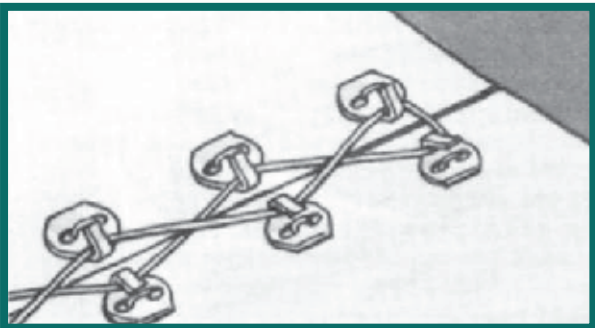
### A. LACING HOOK SYSTEM



1. INSTALL LACING HOOK WITH TIE WIRE.

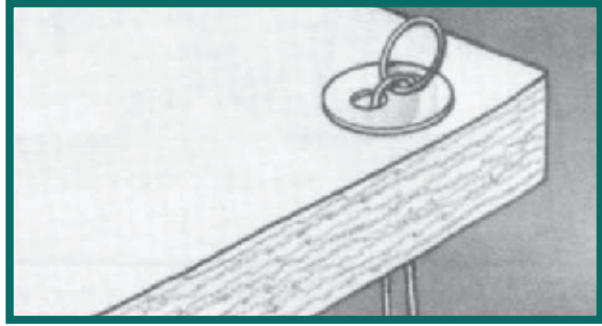


2. SECURE WITH LACING WASHER.

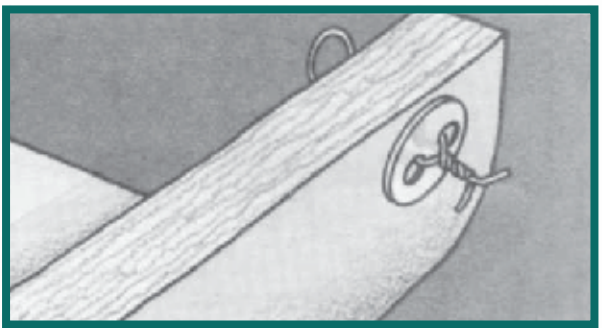


3. SECURE INSULATION BY LACING THROUGH HOOKS.

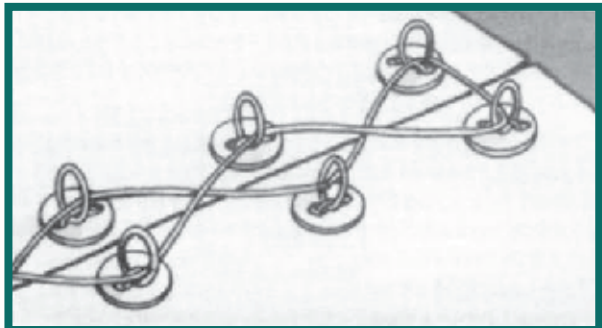
### B. LACING RING SYSTEM



1. INSTALL LACING WASHER & LACING RING WITH TIE WIRE.



2. SECURE WITH LACING WASHER.



3. SECURE INSULATION BY LACING THROUGH RINGS.

**HINT:** SOME USERS PREFER NYLON WIRE TIES FOR STEP 3 (WHERE APPLICATIONS PERMIT).

“QUILTING PINS” ARE ALSO AVAILABLE FOR THE OFF-SEAM AREAS OF REMOVABLE PADS & COVERS, AS WELL AS SLIM-STYLE, NARROW WIDTH ANCHORS.

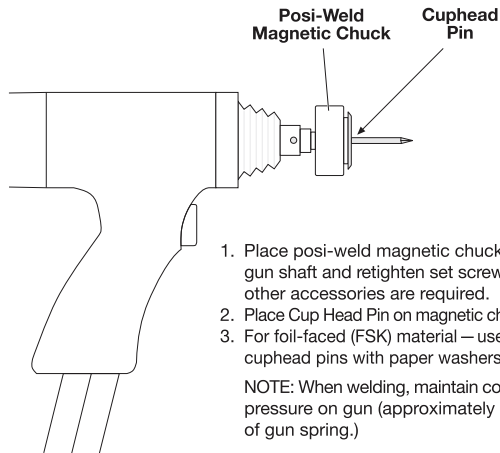
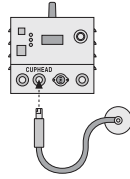


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## WELDING APPLICATIONS

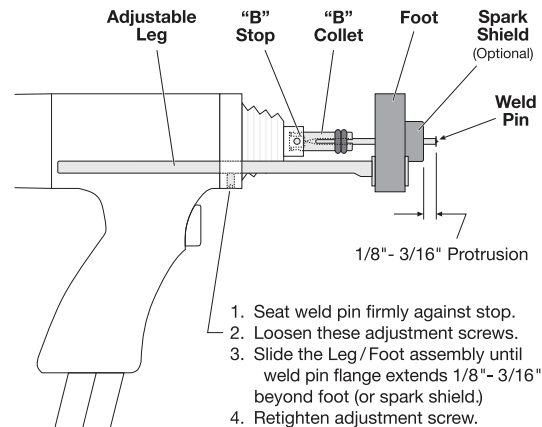
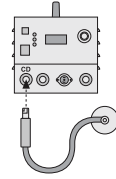
### Gun Setup

#### CUPHEAD PINS



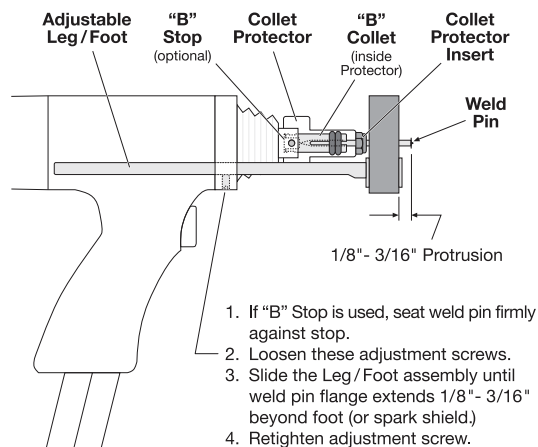
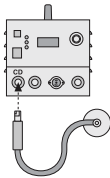
### Gun Setup

#### INSULATION PINS



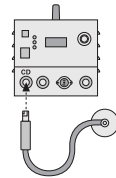
### Gun Setup

#### INSULATION PINS WITH COLLET PROTECTOR



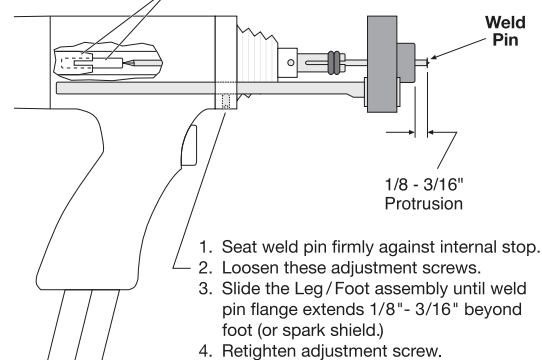
### Gun Setup

#### INSULATION PINS WITH INTERNAL STOP



#### Optional Weld Gun Setup for Insulation Pins Longer Than 4"

(NOTE: shown with Internal Stop and Stop Adjuster used for long pins, rather than "B"-Stop.)



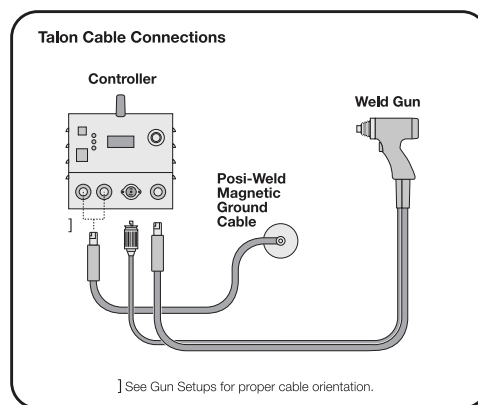
## WHAT IS STUD WELDING?

STUD WELDING is a high-speed joining process in which a Stud or similar metal part can be affixed to a metal workpiece.

**THE PROCESS:** The Stud is placed (with a hand tool called the Stud Gun) in contact with the base metal, an arc is drawn which melts the Stud base and an area of the metal workpiece, the Stud is then forced into the melted area and held in place until the metals re-solidify. This high-quality fusion weld is completed in milliseconds and is accomplished by one of two major methods.

**TWO METHODS AVAILABLE** are Capacitor Discharge (usually "CD" for short) and Arc Stud Welding.

**STUD WELDING SYSTEMS** consist of a Power Supply and/or "Controller", a Stud Gun, and cables to tie the system and workpiece together. (See Cable Connections above.)

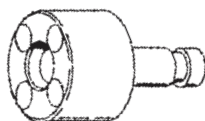


The chart settings shown to the right are "reference" settings to be used as starting points. Actual voltage settings may vary depending upon the conditions or each application and use. (Midwest Talon settings as shown)

Pin/Stud Type	Pin/Stud Dia	Pin/Stud Mat'l.	Voltage Setting
Cuphead Pin	12 GA	Mild Steel	85-95
Insulation Pin	12 GA	Mild Steel	75-85
	10 GA	or Stainless	85-95
Weld Studs (Flanged)	12 GA	Aluminum	110-120
	10 GA		120-130
	#10 or 3/16"	Mild Steel	120-130
	1/4"	or Stainless	145-155
	#8	Aluminum	120-130
	#10 or 3/16"		130-140

## WELDING ACCESSORIES

CUP HEAD CHUCK



101-0501- XX

"B" COLLETS



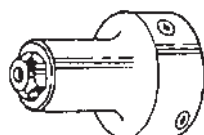
101-0102- XX

"B" STOPS



101-1002- XX

"B" COLLET PROTECTOR



101-0401- XX



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## SURESHOT II

The MIDWEST ultralight pin welder--SureShotII -- welds Cupheads, Weld Pins and Weld Studs up to 1/4" weld base. Featuring Hybrid Power Technology and Dual Operating Power, SureShotII is the most up-to-date Capacitor Discharge pin welder for all applications. Lightweight and rugged, SureShotII has the power to apply virtually any fastener used in the CD Insulation market: with only 110volt (or 220volt) incoming power.

Weight: 18lbs. Dimensions: 13.7" W X 11.6" D X 6" H

## EAGLE



MIDWEST Fasteners' basic pin welder, is a solid-state Capacitor Discharge studwelder. Capable of welding Weld Pins and Weld Studs up to 3/8" weld base in Mild Steel, Stainless & Aluminum materials, EAGLE's standard features make it both portable and flexible for all standard applications.

Weight: 26 lbs. Dimensions: 10" W X 13" D X 8-1/2" H



## TALON

MIDWEST's standard Cuphead portable, the TALON includes all the features of the EAGLE pin system, plus Cuphead components and capability making this one of the key Insulator machines in the MIDWEST line.

Weight: 29 lbs. Dimensions: 10" W X 13" D X 8-1/2" H

## CAPACITOR DISCHARGE STUD WELDER CD80

The mid-line portable from MIDWEST Fasteners, the CD80 targets jobshop users and field insulators where more power is required. With weld capacity up to a 5/16" weld base, the CD80 incorporates higher capacity welding in a Capacitor Discharge 110volt system.

Weight: 56 lbs. Dimensions: 13-1/2" W X 21" D X 9" H



## CD700 CAPACITOR DISCHARGE STUD WELDER

One of MIDWEST's heavy-duty portables, the CD700 is a 110volt Capacitor Discharge system capable of all-type Weld Pins, CD Weld Studs, and Cuphead through-Insulation fasteners. With weld base capacity including 3/8" diameter, the CD700 can also weld Power Base pins to rust covered or contaminated surfaces.

Weight: 66 lbs. Dimensions: 13-1/2" W X 21" D X 9" H

## CAPACITOR DISCHARGE STUD WELDER CD100

For jobshop or in-the-field use, MIDWEST's CD100 is a heavy-duty portable Capacitor Discharge machine. With weld base capability including 3/8" diameter, the CD100 can affix Weld Studs and Weld Pins (including heavy-duty Power tips) in Mild Steel, Stainless & Aluminum, using only 110volt power.

Weight: 66 lbs. Dimensions: 13-1/2" W X 21" D X 9" H



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website: [www.midwestfasteners.com](http://www.midwestfasteners.com)

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