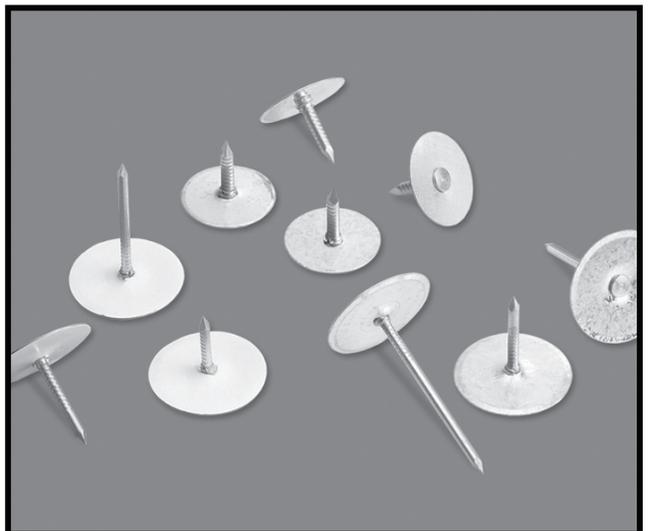
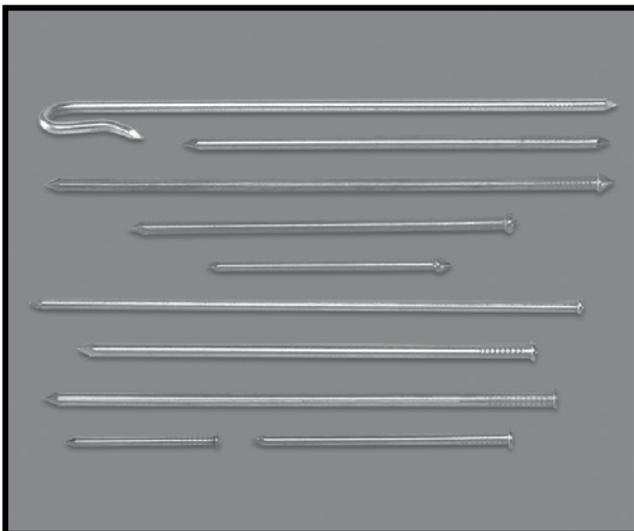
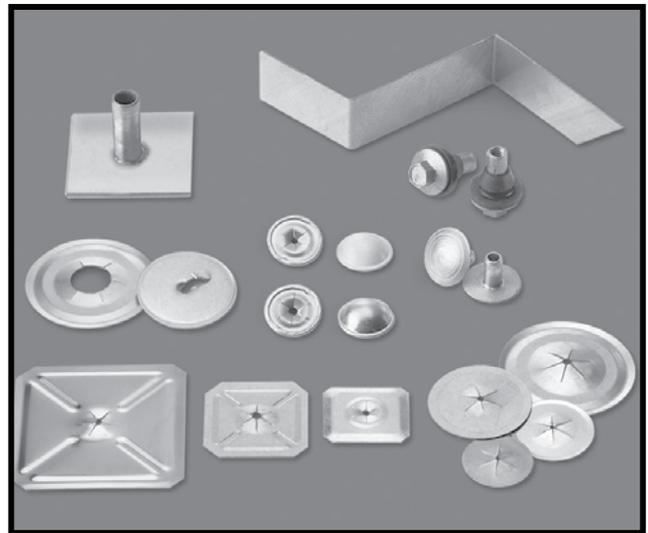
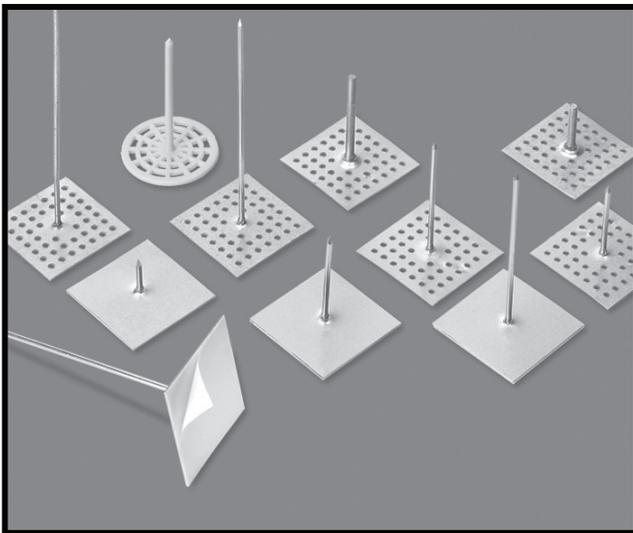




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# INSULATION FASTENERS



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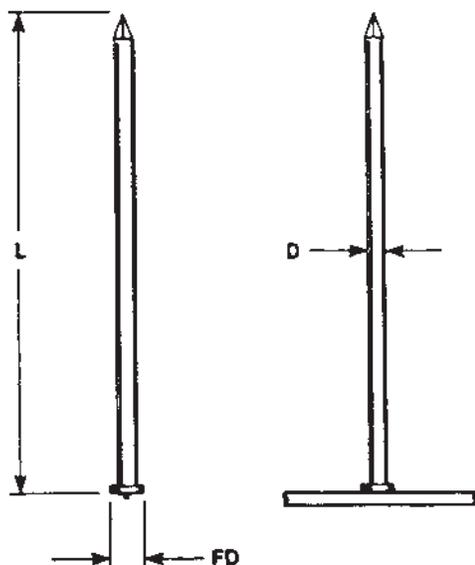
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## CAPACITOR DISCHARGE (CD)

SIZE	PIN		
	D	STEEL FD	ALUM. FD
14GA	.080	.160	-
12GA	.105	.180	.230
3MM	.118	.190	-
10GA	.135	.195	.250

<b>MATERIAL:</b>	<b>LOW CARBON STEEL</b> C - 0.23% max. P - 0.04% max. Mn - 0.90% max. S - 0.05% max.	<b>STAINLESS STEEL</b> AISI grade - 302/304/305 std. Other grades available upon request.
<b>MECHANICAL PROPERTIES:</b>	Tensile 60,000 psi (min.) Yield 50,000 psi (min.) Elongation 20% (in 2 inches)	Values for various grades available upon request.
<b>PLATING:</b>	Galvanized and Copper plating are available.	Does not apply to Stainless.
<b>ANNEALING:</b>	Pins are annealed where required.	Does not apply.

<b>MATERIAL:</b>	ALUMINUM Alloy - 1110-H14 std. Other alloys available upon request.
<b>MECHANICAL PROPERTIES:</b>	Values for various alloys available upon request.

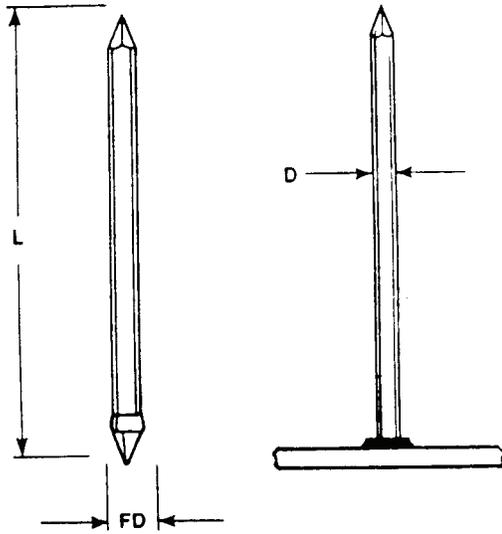
**APPLICATION:** This is the standard weld pin used for most applications.

**WASHERS:** Self-locking washers are available in a variety of sizes, shapes, and materials.

**TO ORDER OR SPECIFY, GIVE:**

1. Product Code..... WP
2. Size.....
3. Length ..... L
4. Material .....





**“POWER TIP” (CD)**

PIN			
SIZE	D	L	FD
12GA	.105	AS REQUIRED	.171
10GA	.135	AS REQUIRED	.187

<b>MATERIAL:</b>	<b>LOW CARBON “MILD” STEEL</b>	<b>STAINLESS STEEL</b>
	C - 0.23% max. P - 0.04% max. Mn - 0.90% max. S - 0.05% max.	AISI grade - 302/304/305 std. Other grades available upon request.
<b>MECHANICAL PROPERTIES:</b>	Tensile	60,000 psi (min.)
	Yield	50,000 psi (min.)
	Elongation	20% (in 2 inches)
		Values for various grades available upon request.
<b>PLATING:</b>	Galvanized and Copper plating are available.	Does not apply to Stainless.
<b>ANNEALING:</b>	Can be annealed if required.	Can be annealed if required.

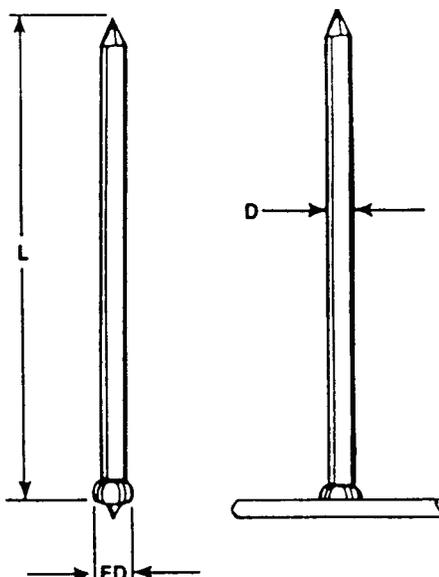
**APPLICATION:** Ideally suited for welding to surfaces covered with mill scale, rust, or paint without costly preparation.

**WASHERS:** Self-locking washers are available in a variety of sizes, shapes, and materials.

**TO ORDER OR SPECIFY, GIVE:**

1. Product Code..... PT
2. Size.....
3. Length ..... L
4. Material .....





**“SURE-FIRE” (CD)**

PIN			
SIZE	D	L	FD
12GA	.105	AS REQUIRED	.175
10GA	.135	AS REQUIRED	.195

<b>MATERIAL:</b>	<b>LOW CARBON “MILD” STEEL</b> C - 0.23% max. P - 0.04% max. Mn - 0.90% max. S - 0.05% max.	<b>STAINLESS STEEL</b> AISI grade - 302/304/305 std. Other grades available upon request.
<b>MECHANICAL PROPERTIES:</b>	Tensile 60,000 psi (min.) Yield 50,000 psi (min.) Elongation 20% (in 2 inches)	Values for various grades available upon request.
<b>PLATING:</b>	Galvanized and Copper plating are available.	Does not apply to Stainless.
<b>ANNEALING:</b>	Can be annealed if required.	Can be annealed if required.

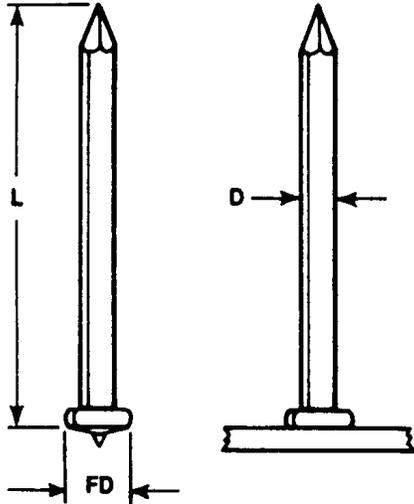
**APPLICATION:** Ideally suited for welding to surfaces covered with mill scale, rust, or paint.

**WASHERS:** Self-locking washers are available in a variety of sizes, shapes, and materials.

**TO ORDER OR SPECIFY, GIVE:**

1. Product Code..... SF
2. Size.....
3. Length ..... L
4. Material .....





**CONICAL TIP (CD)**

PIN			
SIZE	D	L	FD
12GA	.105	AS REQUIRED	.220
10GA	.135	AS REQUIRED	.250

**MATERIAL:** ALUMINUM  
Alloy - 1100-H14 std. Other alloys available upon request.

**MECHANICAL PROPERTIES:**  
Values for various alloys available upon request.

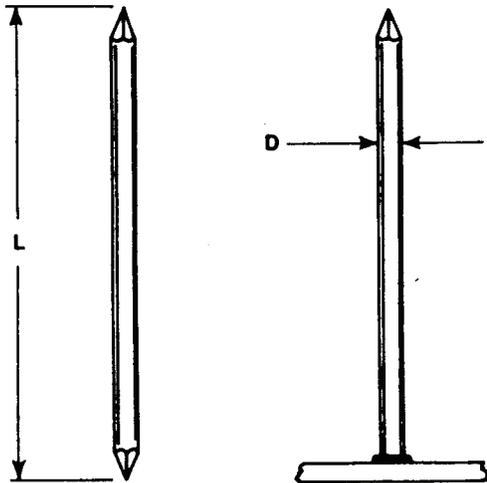
**APPLICATION:** Ideally suited for welding with production Stud Welding systems and for STUCCO embossed panels.

**WASHERS:** Self-locking washers are available in a variety of sizes, shapes, and materials.

**TO ORDER OR SPECIFY, GIVE:**

1. Product Code.....CT
2. Size.....
3. Length ..... L
4. Material .....





## DOUBLE POINTED (ARC)

PIN			
SIZE	D*	L	FERRULE CODE
10GA	.135	AS REQUIRED	F135

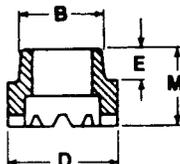
\*Other diameters available upon request.

<b>MATERIAL:</b>	<b>LOW CARBON STEEL</b> C - 0.23% max. P - 0.04% max. Mn - 0.90% max. S - 0.05% max.	<b>STAINLESS STEEL</b> AISI grade - 302/304/305 std. Other grades available upon request.
<b>MECHANICAL PROPERTIES:</b>	Tensile 60,000 psi (min.) Yield 50,000 psi (min.) Elongation 20% (in 2 inches)	Values for various grades available upon request.
<b>PLATING:</b>	Galvanized and Copper plating are available.	Does not apply to Stainless.
<b>ANNEALING:</b>	Can be annealed where required.	Can be annealed if required.

**APPLICATION:** This is the standard weld pin used when only arc stud welding equipment is available.

**WASHERS:** Self-locking washers are available in a variety of sizes, shapes, and materials.

**FERRULES:** Ferrules are component parts of studs. Not sold separately.

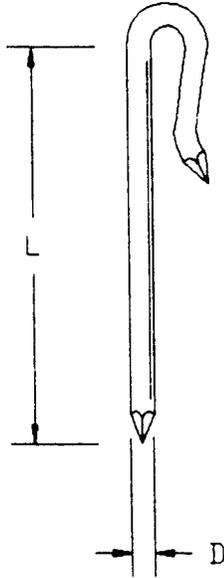


FERRULE					
CODE	B	D	E	M	PART NO.
F135	.281	.375	.156	.390	092 0005 04

**TO ORDER OR SPECIFY, GIVE:**

1. Product Code.....DP
2. Size.....
3. Length..... L
4. Material.....





**“J”- HOOK**

PIN		
SIZE	D*	L
10GA	.135	AS REQUIRED

\*Other diameters available upon request.

<b>MATERIAL:</b>	<b>LOW CARBON STEEL</b> C - 0.23% max.    P - 0.04% max. Mn - 0.90% max.    S - 0.05% max.	<b>STAINLESS STEEL</b> AISI grade - 302/304/305 std. Other grades available upon request.
<b>MECHANICAL PROPERTIES:</b>	Tensile                    60,000 psi (min.) Yield                      50,000 psi (min.) Elongation                20% (in 2 inches)	Values for various grades available upon request.
<b>PLATING:</b>	Galvanized and Copper plating are available.	Does not apply to Stainless.
<b>ANNEALING:</b>	Can be annealed where required.	Can be annealed if required.
<b>APPLICATION:</b> This is the standard insulation fastener used to secure insulation to wire road mesh.		
<b>WASHERS:</b> Self-locking washers are available in a variety of sizes, shapes, and materials.		

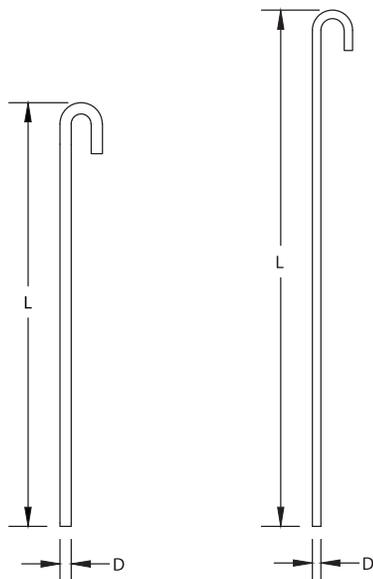
**TO ORDER OR SPECIFY, GIVE:**

1. Product Code..... JH
2. Size.....
3. Length ..... L
4. Material .....



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## SOLAR CLIP “BIRD WIRE PIN”

### PIN

SIZE	D	L
14GA	0.080	AS REQUIRED
12GA	0.105	AS REQUIRED
10GA	0.135	AS REQUIRED

<b>MATERIAL:</b> <b>STAINLESS STEEL</b> AISI grade - 302/304/305 std. Other grades available upon request.	<b>ALUMINUM</b> Alloy - 1100-H14 standard grade Other alloys available upon request.
<b>MECHANICAL PROPERTIES:</b> Values for various grades available upon request.	Values for various alloys available upon request.
<b>PLATING:</b> Does not apply to Stainless.	Does not apply to Aluminum.

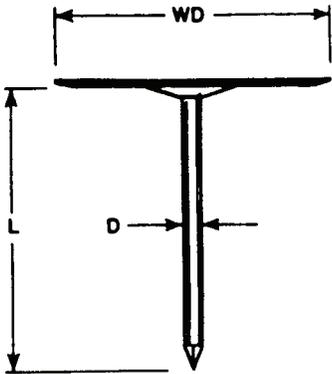
**APPLICATION:** This is the standard solar clip fastener used to secure protective road mesh on rooftop applications.

**WASHERS:** Self-locking washers are available in several sizes, shapes, materials, and finishes.

### TO ORDER OR SPECIFY, GIVE:

1. Product Code..... JH
2. Size.....
3. Length ..... L
4. Material .....





**CUP HEAD PIN (CD)**

TYPE	D	WD	MIN.	MAX.
			L	L
CS12	.105	1.187	3/8	16"
CS14	.080	1.187	3/16	16"
CL12	.105	1.500	3/8	16"

PIN		WASHER	
<b>MATERIAL:</b>	<b>LOW CARBON STEEL</b> C - 0.23% max. P - 0.04% max. Mn - 0.90% max. S - 0.05% max.	<b>LOW CARBON STEEL</b> C - 0.23% max. P - 0.04% max. Mn - 0.90% max. S - 0.05% max.	
<b>MECHANICAL PROPERTIES:</b>	Values available upon request.	Values available upon request.	
<b>PLATING:</b>	Galvanized is standard. Copper plating is available upon special request.	Standard Washer is galvanized.	

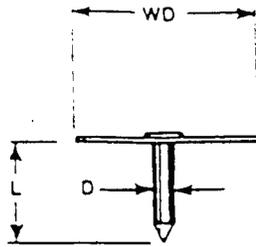
**BEVEL:** Washer edge is beveled to prevent cutting of insulation material.

**STAINLESS STEEL:**  
Not standard, but available by special order.

**PAPER INSULATING WASHERS:**  
Available for welding through foil faced insulation.  
Paper insulating washers can be ordered separately or factory installed.

- TO ORDER OR SPECIFY, GIVE:**
1. Product Code..... CHSW
  2. Size.....
  3. Length ..... L
  4. Material .....





## CUP HEAD PIN

**APPLICATION:** This cup head pin is for use with Duro-Dyne auto feed resistance welding equipment.

			MIN.
TYPE	D	WD	L
CM10	.135	1.000	3/8

PIN		WASHER
<b>MATERIAL:</b>	<b>LOW CARBON STEEL</b> C - 0.23% max. P - 0.04% max. Mn - 0.90% max. S - 0.05% max.	<b>LOW CARBON STEEL</b> C - 0.23% max. P - 0.04% max. Mn - 0.90% max. S - 0.05% max.
<b>MECHANICAL PROPERTIES:</b>	Values available upon request.	Values available upon request.
<b>PLATING:</b>	Galvanized is standard. Copper plating is available upon special request.	Standard Washer is galvanized.
<b>BEVEL:</b>	Washer edge is beveled to prevent cutting of insulation material. Flat washer style also standard. Both styles Auto-Feed quality.	
<b>STAINLESS STEEL:</b>	Not standard, but available by special order.	

**TO ORDER OR SPECIFY, GIVE:**

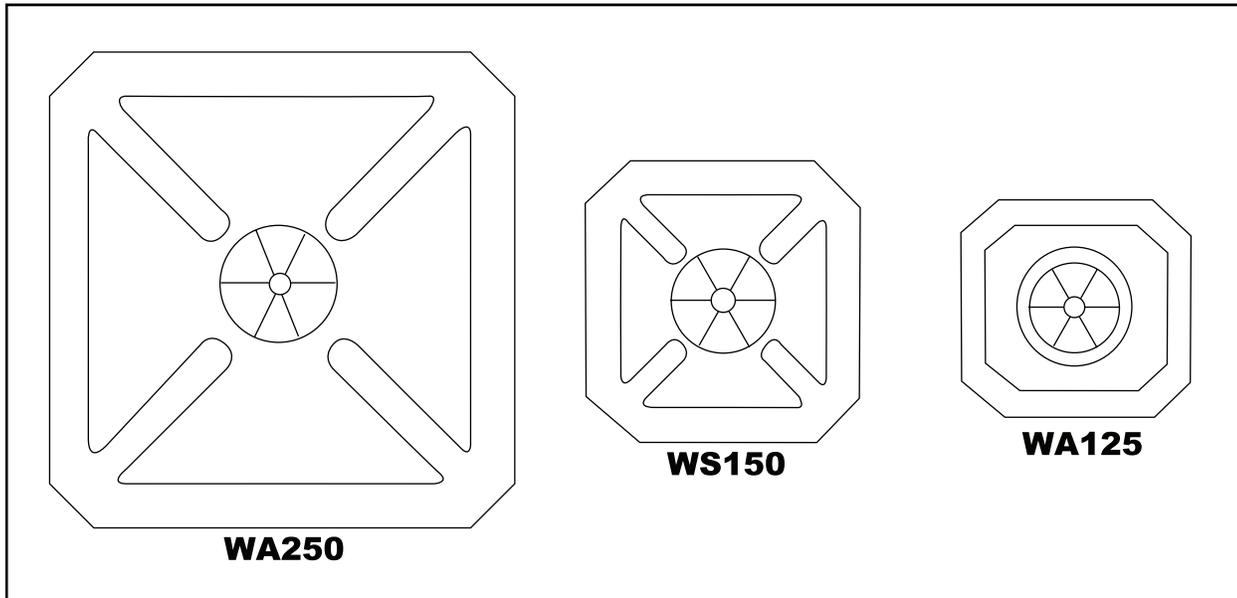
1. Product Code.....CHMW
2. Washer Type.....Beveled or Flat
3. Length ..... L
4. Material.....



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## SELF-LOCKING WASHERS (Square)



Type	WA 250	WS 150	WA 125
Diameter	2-1/2 x 2-1/2	1-1/2 x 1-1/2	1-1/4 x 1-1/8
Thickness	.015 nom.	.015 nom.	.015 nom
Material	Mild Steel	Mild Steel	Mild Steel
Plating	Galv.	Galv.	Galv.
Edges / flat or beveled	beveled	beveled	beveled
Other materials available	Alum., S.S.	Alum., S.S.	Alum., S.S.
Packaged per carton	1000	1000	1000

**MIDWEST FASTENERS** Self-Locking Washers are used in conjunction with **MIDWEST FASTENERS** weld pins, insul-anchors and lacing anchors to fasten insulation in place. Simply press the self-locking washer onto the pin up to the insulation until the desired position is reached. Then clip off, (or bend over) the remaining portion of pin for a permanent attachment.

Both Round or Square self-locking washers are available as a matter of design or application preference. The domed, multi-lanced hole design provides for

ease of locating washer on pin and positive locking. Most styles of washers are manufactured with a beveled edge to prevent the washer from cutting into the insulation facing.

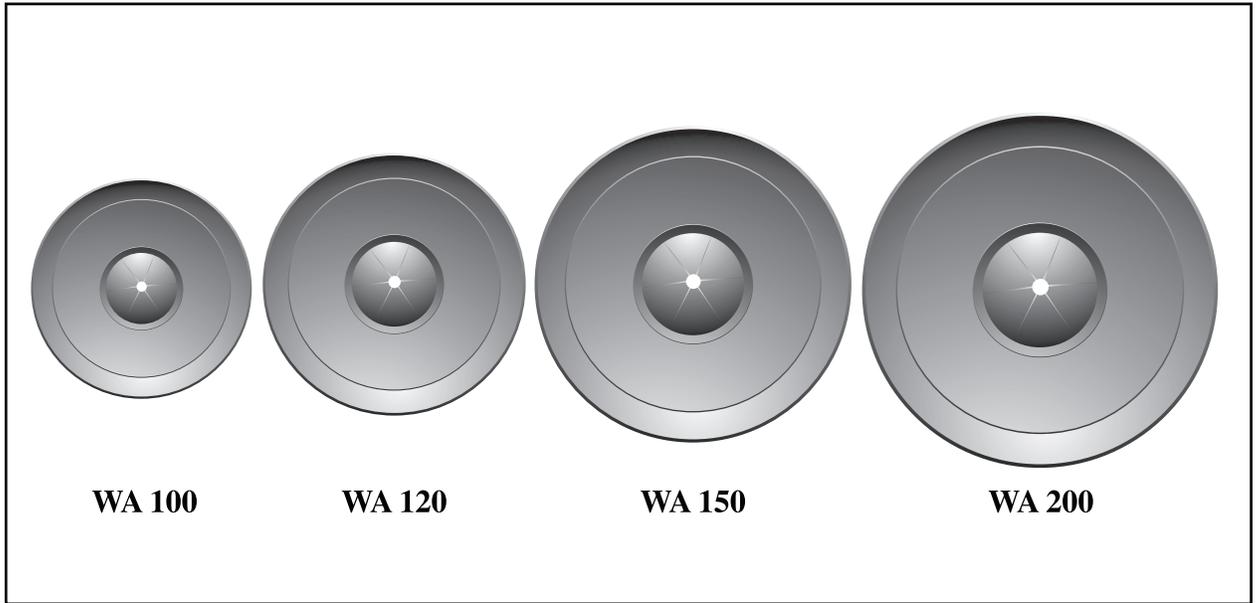
**MIDWEST FASTENERS** Self-Locking Washers are available according to the chart above and with standard 10 GA, 12 GA, or 14 GA hole sizes off-the-shelf. Other material/plating combinations and hole sizes are available by special order.

### TO ORDER OR SPECIFY, GIVE:

1. Product Code..... WA, WS
2. Material ..... MS, SS, AL
3. Type..... 250, 150, 125
4. Diameter of pin/stud on which washer is to be used .....



## SELF-LOCKING WASHERS (Round)



Type	WA 100	WA 120	WA 150	WA 200
Diameter	1"	1-3/16"	1-1/2"	2"
Thickness	.015 nom.	.015 nom.	.015 nom.	.015 nom.
Material	Mild Steel	Mild Steel	Mild Steel	Mild Steel
Plating	Galv.	Galv.	Galv.	Galv.
Edges / flat or beveled	beveled	beveled	beveled	beveled
Other materials available	Alum., S.S.	Alum., S.S.	Alum., S.S.	Alum., S.S.
Packaged per carton	1000	1000	1000	1000

**MIDWEST FASTENERS** Self-Locking Washers are used in conjunction with **MIDWEST FASTENERS** weld pins, insul-anchors and lacing anchors to fasten insulation in place. Simply press the self-locking washer onto the pin up to the insulation until the desired position is reached. Then clip off, (or bend over) the remaining portion of pin for a permanent attachment.

Both Round or Square self-locking washers are available as a matter of design or application preference. The domed, multi-lanced hole design provides for ease of

locating washer on pin and positive locking. Washers are manufactured with a beveled edge to prevent the washer from cutting into the insulation facing.

**MIDWEST FASTENERS** Self-Locking Washers are available according to the chart above and with standard 10 GA, 12 GA, or 14 GA hole sizes off-the-shelf. Other material/plating combinations and hole sizes are available by special order.

### TO ORDER OR SPECIFY, GIVE:

1. Product Code..... WA
2. Material .....MS, SS, AL
3. Type.....100, 120, 150, or 200
4. Diameter of pin/stud on which washer is to be used .....



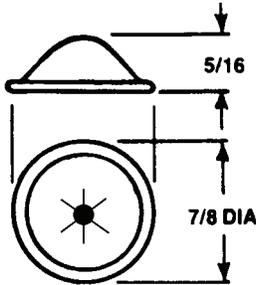
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## MISCELLANEOUS INSULATION WASHERS

### CAPPED SPEED WASHER

PCW



**APPLICATION:**

Designed to permanently lock on to weld pins or insul-anchors where appearance is a major factor, or where no sharp points or edges are permissible on the surface.

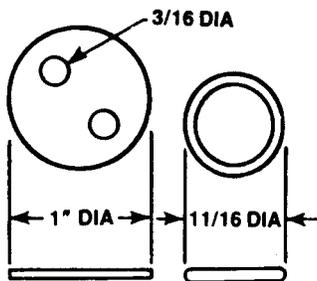
**MATERIAL:** Decorative Domed Cap— Aluminum  
Self-Locking Insert— Stainless Steel

**COLOR:** Plain (bright aluminum) painted white or black. Other painted colors are available by special order.

**TO ORDER OR SPECIFY, GIVE:**

1. Product Code.....PCW
2. Size.....10 GA, 12 GA or 14 GA
3. Color .....

L2H  
LRZA



### LACING WASHER & RING

**APPLICATION:**

Designed to be used with lacing wire to wrap insulation around irregular shapes.

**MATERIAL:** Washer— Aluminum or Stainless Steel  
Ring— Zinc alloy, bright zinc plated.

**NO-AB:** Washers are available stamped 'NO AB' to indicate non-asbestos material.

**TO ORDER OR SPECIFY, GIVE:**

**Lacing Washer**

1. Product Code..... L2H
2. Material .....

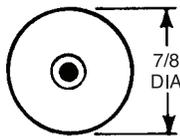
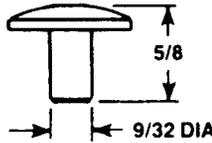
**Lacing Ring**

1. Product Code.....LRZA
2. Material .....Zinc Alloy



## NAVY STUDS – WASHERS, CAPS & NUTS

### MCAL



### ANNULAR RING CAP (For annular ring studs)

**APPLICATION:**

Designed to permanently lock on to Navy annular ring studs.

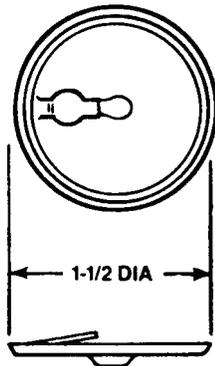
**MATERIAL:** Aluminum, Mild Steel and Stainless Steel

**SIZE:** For or 3/16" diameter studs.

**TO ORDER OR SPECIFY, GIVE:**

- 1. Product Code..... MCAL
- 2. Size.....

### WAK



### KEY HOLE SLOTTED WASHER (For 3/16 dia. notched end studs)

**APPLICATION:**

Designed to lock on to Navy notched end studs.

**MATERIAL:** Mild Steel—Galvanized.

**TO ORDER OR SPECIFY, GIVE:**

- 1. Product Code.....WAK
- 2. Material .....

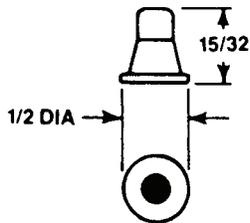
### FLAT WASHERS & HEX NUTS (For all threaded studs)

These “accessory” items can be ordered with Threaded Weld Studs for general application and to meet Military Specifications where required.



## PANEL CAPS & NUTS

### WAG AL



### ANNULAR GROOVE CAP (For annular groove shoulder studs)

**APPLICATION:**

Designed to permanently lock on to annular groove shoulder studs to hold panel in place against stud shoulder.

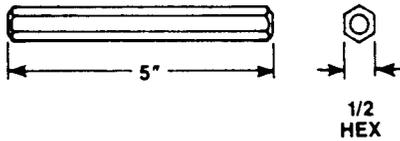
**MATERIAL:** Aluminum

**SIZE:** For 3/16 diameter annular groove

**TO ORDER OR SPECIFY, GIVE:**

1. Product Code.....WAG AL

### CAP SETTING TOOL (For installing WAG AL caps)



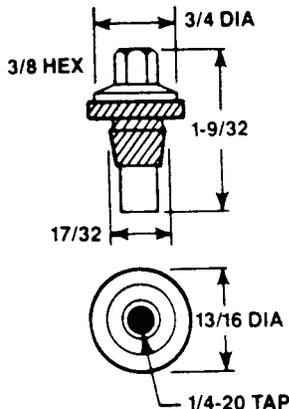
**APPLICATION:**

This tool is recommended for installing the Annular Groove Cap (above).

**TO ORDER OR SPECIFY, GIVE:**

1. Name .....Cap Setting Tool

### PNAL



### PANEL NUT (For 1/4-20 threaded studs)

**APPLICATION:**

Designed to be threaded down through pre-drilled holes in the panel on to pre-welded studs providing firm, water resistant attachment.

**MATERIAL:** Aluminum & Neoprene Rubber.

**SIZE:** For 1/4-20 threaded studs.

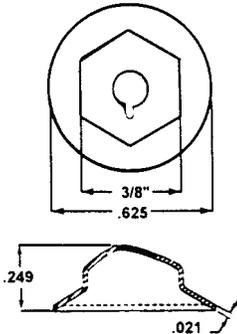
**TO ORDER OR SPECIFY, GIVE:**

1. Product Code.....PNAL



## COMBINATION NUTS

### PAL-NUT



### COMBINATION HEX-NUT and LOCK-WASHER (“OPEN”) for 10-24 threaded studs

**APPLICATION:** with 10-24 weld studs.

One-piece washer-type locknut combination serving as hex nut, lockwasher and flat washer. Locking design eliminates back-off due to vibration and thermal stress.

**MATERIAL:** Mild Steel. Zinc Plated.

**SIZE:** For 10-24 threaded studs

**TO ORDER OR SPECIFY, GIVE:**

1. Product Code.....PAL-NUT
2. Part Number .....D010241

### COMBINATION HEX-NUT and LOCK-WASHER (“CLOSED”) for 10-24 threaded studs

**APPLICATION:** with 10-24 weld studs.

One-piece washer-type locknut combination serving as hex nut, lockwasher and flat washer. Design encloses fastener when placed on stud.

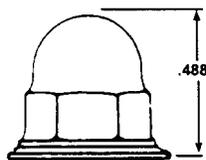
**MATERIAL:** Mild Steel. Nickel Plated.

**SIZE:** For 10-24 threaded studs

**TO ORDER OR SPECIFY, GIVE:**

1. Product Code.....CAP-NUT
2. Part Number .....KD102410

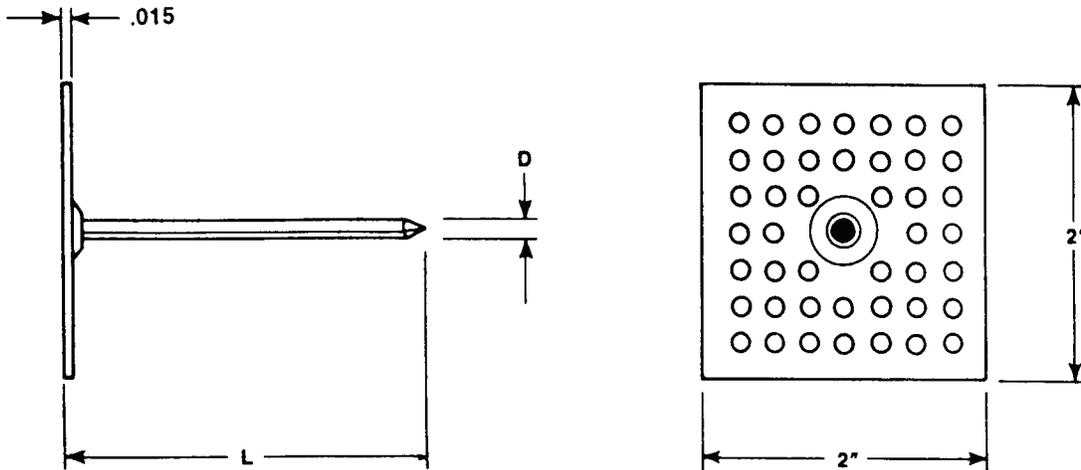
### HEX CAP NUT



Style KD



## SPINDLE



**SIZE:** D 12 GA (.105") is standard.  
Other sizes available by special order only.

**LENGTH:** L 1", 1-5/8", 2", 2-1/2", 3-1/2", 4-1/2", 5-1/2", 6-1/2", 8" and 9" are standard. Other lengths available by special order.

**PIN**

**MATERIAL:** LOW CARBON STEEL

**PLATING:** Galvanized coating is standard.

**PLATE**

**MATERIAL:** LOW CARBON STEEL

**PLATING:** Galvanized is standard.

**OTHER MATERIALS**

Also available by special order in all Stainless Steel or all Aluminum

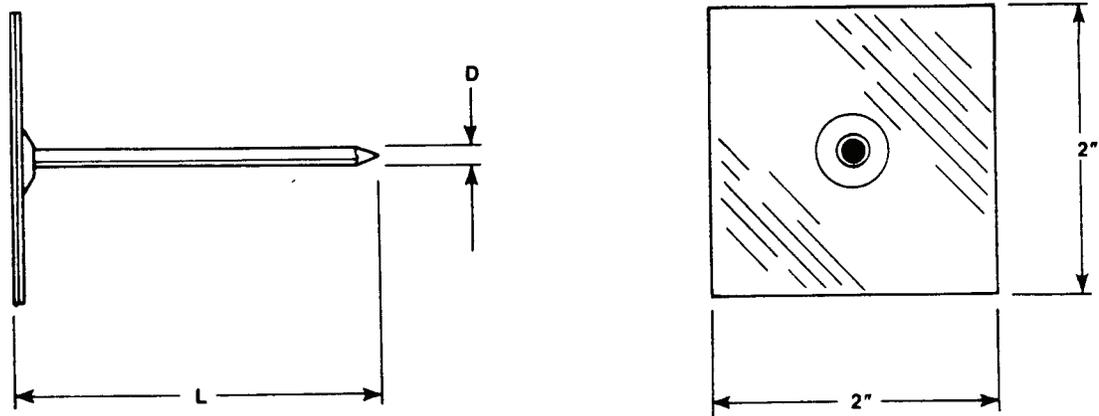
**WASHERS:** Self-locking washers are available in a variety of sizes, shapes, and materials.

**TO ORDER OR SPECIFY, GIVE:**

1. Product Code..... IHSP
2. Size..... 12 GA
3. Length ..... L
4. Material ..... (if other than standard)



## SELF-STICK



**SIZE:** D 12 GA (.105") is standard.  
Other sizes available by special order only.

**LENGTH:** L 1", 1-5/8", 2", 2-1/2", 3-1/2", 4-1/2", 5-1/2", 6-1/2", 8" and 9" are standard. Other lengths available by special order.

**PIN**

**MATERIAL:** LOW CARBON STEEL

**PLATING:** Galvanized coating is standard.

**PLATE**

**OTHER MATERIALS**

**MATERIAL:** LOW CARBON STEEL

Also available by special order in all Stainless Steel or all Aluminum

**PLATING:** Galvanized coating is standard.

**WASHERS:** Self-locking washers are available in a variety of sizes, shapes, and materials.

**TO ORDER OR SPECIFY, GIVE:**

1. Product Code..... IHSS
2. Size..... 12 GA
3. Length ..... L
4. Material .....(if other than standard)





## 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.

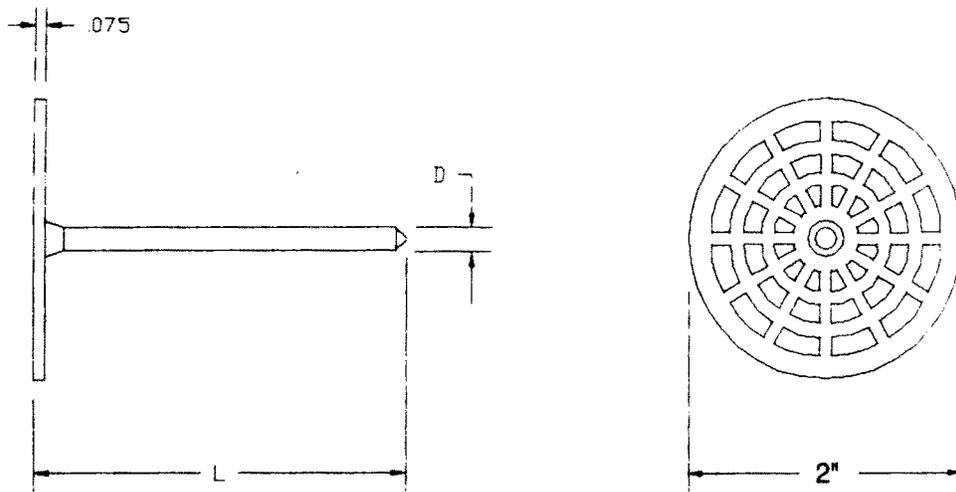
No statement or recommendation not contained herein shall have any force or effect unless in an agreement signed by officers of seller and manufacturer.

## GUIDELINES FOR SELF STICK INSUL-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.



NYLON

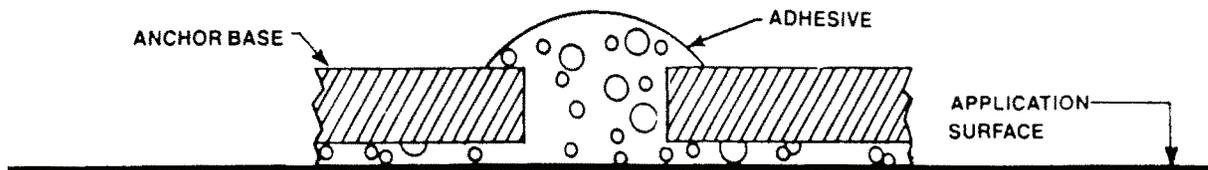


**SIZE:** D 5/32" Standard

**LENGTH:** L 2-1/2" Standard

**MATERIAL:** This is a one-piece insul-anchor of molded nylon.

- FEATURES:**
- Can be used for insulation up to 2" thick.
  - Has a base area 14% larger than similar nylon anchors with a round base.
  - Has 21% more perforated area for glue extrusion than similar nylon anchors.
  - Uses 30% less adhesive than metal insul-anchors with a 2" round base.
  - Will not conduct heat or cold.
  - Lighter in weight than metal anchors for ease of handling.



**WASHERS:** The self-locking washer for use with this insul-anchor is the WAMS-120-156. These washers are packed with anchors.

**TO ORDER OR SPECIFY, GIVE:**

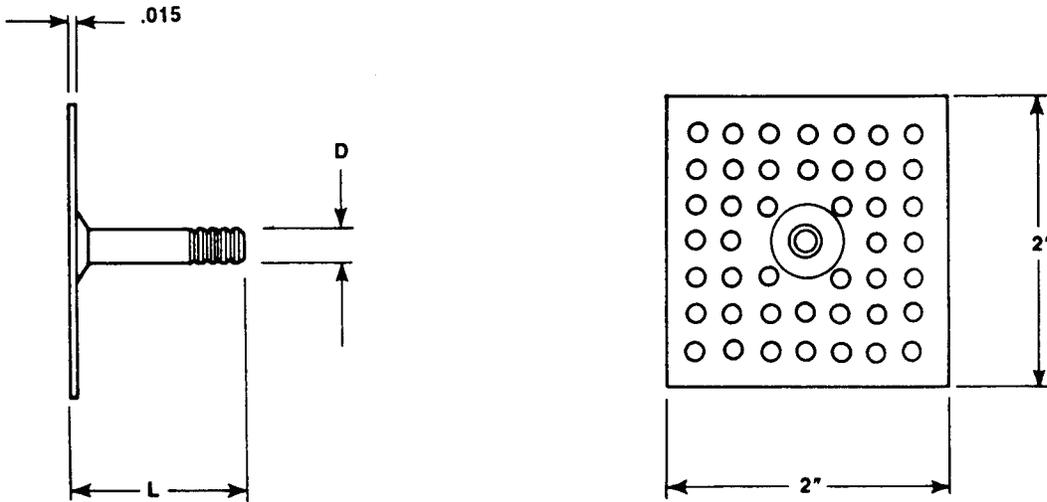
1. Product Code.....IHNY



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## ANNULAR RING ANCHOR-BOLT



<b>SIZE:</b>	D	3/16 nominal. Actual ring diameter is .175".
<b>LENGTH:</b>	L	7/8, 1-7/8, 2-7/8, and 3-7/8 are standard. Other lengths available by special order.

	<b>PLATE</b>	<b>BOLT</b>
<b>MATERIAL:</b>	LOW CARBON STEEL	LOW CARBON STEEL
<b>PLATING:</b>	Galvanized is standard.	Copper plating is standard.

**OTHER MATERIALS:**  
Available by special order only.

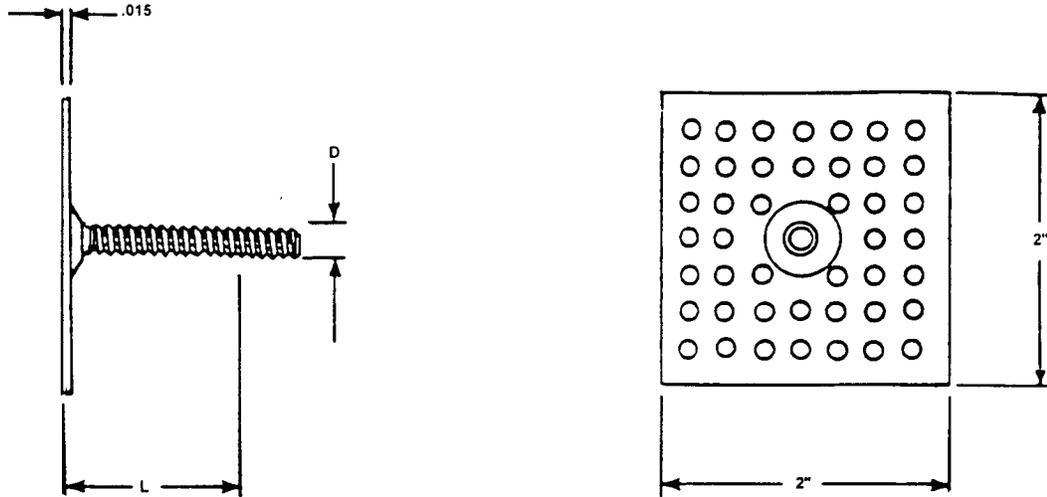
**RETAINING CAP:**  
The cap for use with this anchor-bolt is the MCAL part no. MCAL-625-875.

**TO ORDER OR SPECIFY, GIVE:**

1. Product Code..... IHAB
2. Size..... D
3. Length..... L
4. Material..... (if other than standard)



## THREADED ANCHOR-BOLT



**SIZE:** D #10-24 is standard. Other sizes available by special order.

**LENGTH:** L 3/4" to 3" long, in 1/4" increments as standard.  
Other lengths available by special order.

	<i><b>PLATE</b></i>		<i><b>BOLT</b></i>
<b>MATERIAL:</b>	LOW CARBON STEEL		LOW CARBON STEEL
<b>PLATING:</b>	Galvanized plating is standard.		Copper plating is standard.

**OTHER MATERIALS:**  
Available by special order only.

**HARDWARE:**  
Hex nuts, flat washers and lock washers are available in a variety of materials.

**TO ORDER OR SPECIFY, GIVE:**

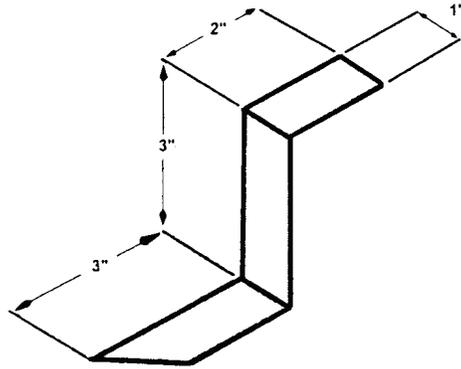
1. Product Code .....IA AB-THD
2. Size .....D
3. Length ..... L
4. Material ..... (if other than standard)



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**SAFING "Z" CLIP**



**SIZE:** 2" x 3" x 3" x 1" standard size

**LENGTH:** 20 Gauge, Mild Steel

**PLATING:** Galvanized is standard.

**APPLICATION:** For use in installation of fire barrier and sound barrier safing insulations.

This non-welded fastener is used as a support bracket to impale and secure Insulating materials between floor slab and spandrels at floor edge or anywhere that support for material is required.

**STANDARD PACKAGING:**

500 per carton (43lbs. carton weight - approximately)

**TO ORDER OR SPECIFY, GIVE:**

1. Product Code.....ZCLIP
2. Size.....(if other than standard)
3. Material .....(if other than standard)



## 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 and in 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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## MIDWEST Fasteners

### IHA-ZVOC INSULATION HANGER ADHESIVE

#### **Product Data:**

MIDWEST Fasteners Zero VOC Insulation Hanger Adhesive is a cream-paste construction type adhesive, formulated for adhering anchors for hanging insulation .

IHA-ZVOC Hanger Adhesive is specially formulated to bond metal anchors to metal and unfinished masonry surfaces. IHA-ZVOC dries to a tough, yet resilient bonding that can withstand thermal cycling and shock.

MIDWEST Fasteners IHA-ZVOC Hanger Adhesive has been specifically formulated to meet strict VOC requirements and, based on independent testing, has been MAS certified "Green" and is LEED v4 compliant.



#### **Special Characteristics:**

- Thermal shock resistance
- High bond strength
- Water resistant
- Immediate grab
- Mildew resistant

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

**Base:** Thermoplastic Rubber

**Type:** Solvent

**Solids Content:** 64%

**Color:** Light Brown/Tan

**Weight/gallon:** 9.4 lbs./gal.

**Water Resistance:** Not miscible or difficult to Mix

**Consistency:** Paste

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

**Service Temperature:** -20°F to 225°F

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

**Flammability (solid, gaseous):** not applicable

**Flash point:** 9°F

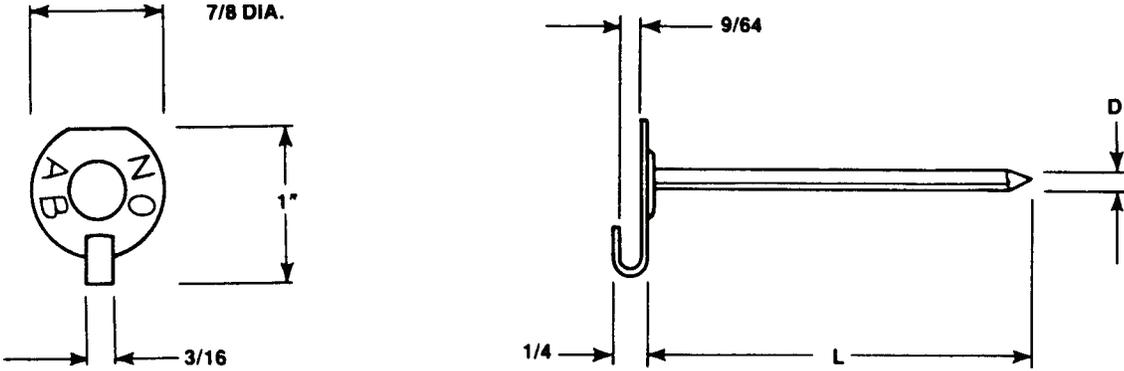
**Average Nonvolatile:** 53%

**Bonding time:** 0-4 minutes

**Drying Time:** For best results allow minimum 48 hours before load



# LACING ANCHOR

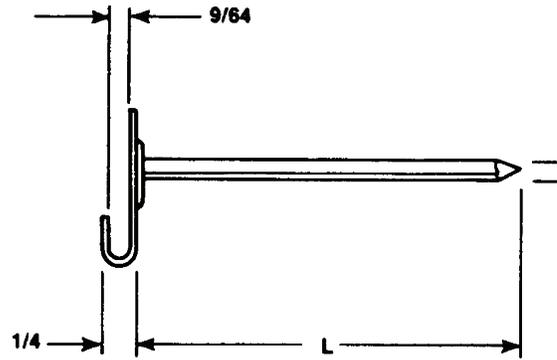
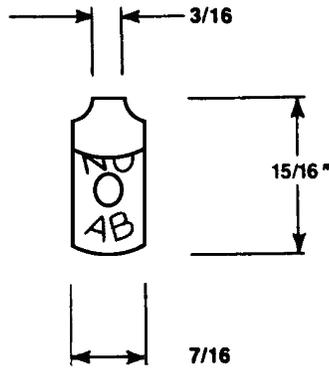


<b>SIZE:</b>	D	12 GA & 14 GA are standard. Other sizes are available by special order.
<b>LENGTH:</b>	L	2-1/2" & 4-1/2" are standard. Other lengths available by special order.
<b>MATERIAL:</b>	LOW CARBON STEEL	STAINLESS STEEL
<b>PLATING:</b>	Zinc plating is standard.	Does not apply to stainless.
<b>OTHER MATERIALS:</b>	Available by special order only.	
<b>WASHERS:</b>	Self-locking washers are available in a variety of sizes, shapes, and materials.	
<b>TO ORDER OR SPECIFY, GIVE:</b>		

1. Product Code.....LA
2. Size.....D
3. Length.....L
4. Material.....(if other than standard)



## SLIM LACING ANCHOR



**SIZE:** D 12 GA & 14 GA are standard. Other sizes are available by special order.

**LENGTH:** L 2-1/2" & 4-1/2" are standard. Other lengths available by special order.

**MATERIAL:** LOW CARBON STEEL

STAINLESS STEEL

**PLATING:** Zinc plating is standard.

Does not apply to stainless.

**NO-AB:** Furnished stamped NO AB to indicate non-asbestos material.

**OTHER MATERIALS:**

Available by special order only.

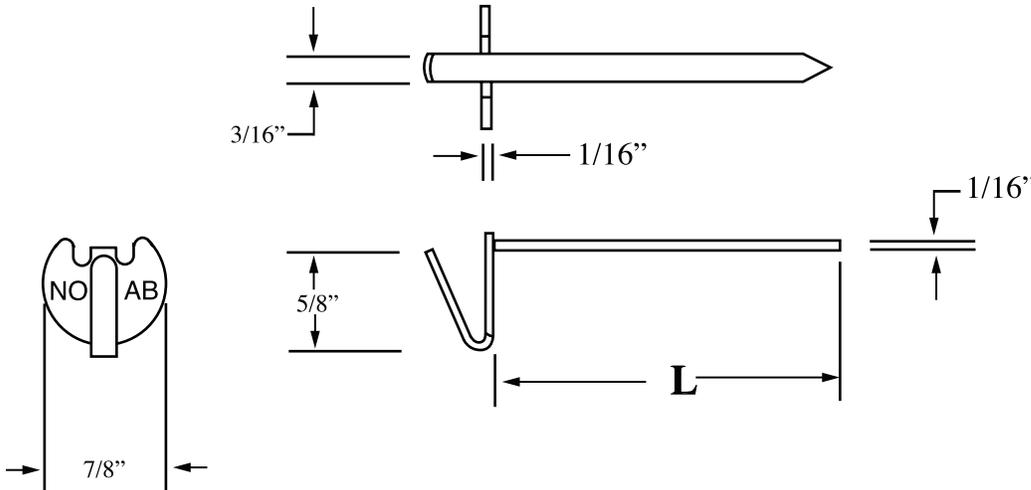
**WASHERS:** Self-locking washers are available in a variety of sizes, shapes, and materials.

**TO ORDER OR SPECIFY, GIVE:**

1. Product Code ..... LS
2. Size ..... D
3. Length ..... L
4. Material .....(if other than standard)



# BERGEN HOOK



<b>SIZE:</b>	Flat Stock	3/16" X 1/16" dimensions are standard.
<b>LENGTH:</b>	L	2-1/2" and 4" lengths are standard.
<b>MATERIAL:</b>	LOW CARBON STEEL	STAINLESS STEEL
<b>PLATING:</b>	Zinc plating is standard.	Does not apply to stainless.
<b>OTHER MATERIALS:</b> Available by special order only, based on requirements and quantities.		
<b>WASHERS:</b>	Self-locking washers are available in 1-3/16" round (K120) size for use with this anchor as shown below.	

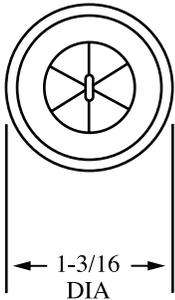
**TO ORDER OR SPECIFY, GIVE:**

1. Product Code .....BH
2. Length .....L
3. Material .....

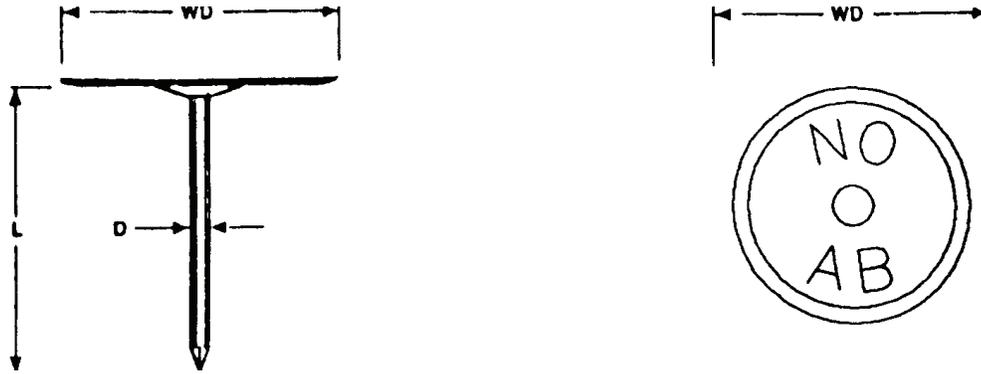
**PART NO. WAMS-120-BH**

**SELF-LOCKING WASHER**

WASHER: Sold separately, not a component part of anchor.  
 MATERIAL: Mild Steel, Stainless Steel



## QUILTING PIN



<b>SIZE:</b>	D	12 GA & 14 GA are standard. Other sizes are available by special order.
	WD	1.187" diameter washer is standard.
<b>LENGTH:</b>	L	2-1/2" & 4-1/2" are standard. Other lengths available by special order.
<b>MATERIAL:</b>	LOW CARBON STEEL	STAINLESS STEEL
<b>PLATING:</b>	Does not apply to Low Carbon.	Does not apply to stainless.
<b>OTHER MATERIALS:</b>	Available by special order only.	
<b>WASHERS:</b>	Self-locking washers are available in a variety of sizes, shapes, and materials.	

**TO ORDER OR SPECIFY, GIVE:**

1. Product Code.....QP
2. Size.....D
3. Length ..... L
4. Material .....(if other than standard)

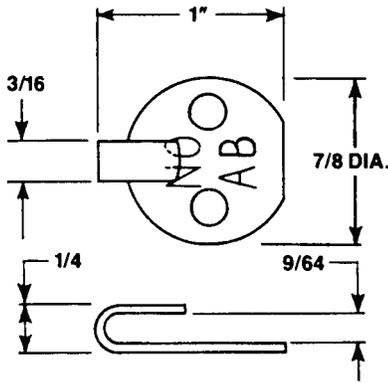


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## LACING ACCESSORIES

### LA HOOK



### LACING HOOK

**SIZE:** One size as shown.

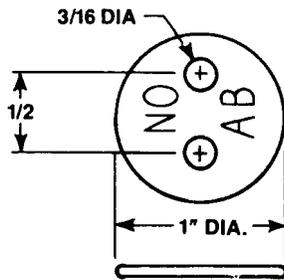
**MATERIAL:** Stainless Steel.

**NO-AB:** Furnished stamped NO AB to indicate non-asbestos material.

**TO ORDER OR SPECIFY, GIVE:**

1. Product Code.....LAH
2. Material .....

### LA L100



### L100 LACING WASHER

**SIZE:** One size as shown.

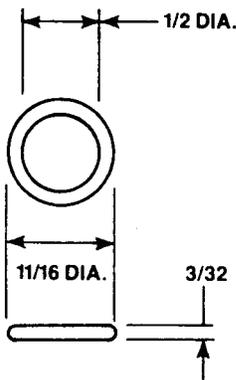
**MATERIAL:** Aluminum or Stainless Steel

**NO-AB:** Available stamped NO AB to indicate non-asbestos material.

**TO ORDER OR SPECIFY, GIVE:**

1. Product Code.....L2H
2. Material .....

### LA RING



### LACING RING

**SIZE:** One size as shown.

**MATERIAL:** Zinc alloy - bright zinc plated

**TO ORDER OR SPECIFY, GIVE:**

1. Product Code.....LRZA





## SURESHOT II

The MIDWEST ultralight pin welder--SureShotII -- welds Cupheads, Weld Pins and Weld Studs up to 5/16" 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 1/4" 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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