

## **SECTION 4**

## **ARC WELD STUDS - REFRACTORY ANCHORS**

FOR INQUIRIES, TO PLACE ORDERS, SERVICE AND TECHNICAL SUPPORT CONTACT ANY OF THE FOLLOWING:

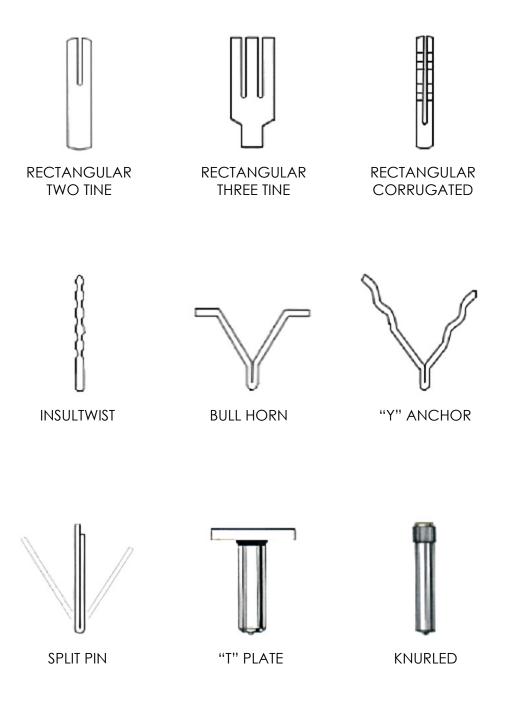
> OFFICE: 1-800-462-9353 713-939-8903

EMAIL: INFO@SUNBELTSTUDWELDING.COM



# **Refractory Studs**

### **REFRACTORY STUDS**



\*other studs available on request



### **GENERAL SPECIFICATIONS - ARC STUD WELDED ANCHORS**

	Arc Stud Welded Refractory Anchors							
Material	Standard in low carbon steel and 302/304/305 stainless. Monel, inconel, and other grades of stainless steel are available.							
Plating	•	Plating is not standard. Cadmium to ASTMA 165, type TS and zinc to ASTM B 633 are available. Non-weldable plating is removed from the weld end to avoid contamination of the weld.						
Annealing	Low carbon steel can be annealed to a maximum of 75 Rockwell B and stainless steel to a maximum of 90 Rockwell B.							
Weld Base	Solid flux is provided where required.							
	SUNBELT arc stud length designations are BEFORE	Stud Diameter	Approx. Reduction					
	WELD.	3/16" thru 1/2"	1/8"					
Stud Length	AFTER WELD lengths are shown in the table.	5/8" thru 7/8"	3/16"					
		7/8" and over	1/4"					
		I/8" wide rectangulars	1/8"					
Ferrules	All orders include ferrules when required.							

#### DESIGNING WITH SUNBELT ARC STUD WELDED REFRACTORY ANCHORS

Advantages: Sunbelt Arc stud welded refractory anchors reduce costs and downtime and increase production through speedier installationand improved product quality.

Arc stud welding systems are portable and require minimal instruction or maintenance for use.

Speed of anchor application and ease of use reduce labor requirements and eliminate other complicated fastening systems while maintaining excellent weld quality and improved refractory holding power.

#### HOW TO CHOOSE THE PROPER REFRACTORY ANCHOR

Style: See table on page 4.4.

**Material:** The following temperature limits at the hot face or surface of the refractory, are recommended for anchors of the steel grades shown.

Steel Type	Hot Face Tempature Limit
Low Carbon Steel	1000° F
Stainless-304 or 305 Stainless-309 or 310	2000° F 2500° F

The temperatures indicated are those encountered in continuous service. Slightly higher temperatures can be withstood if the fluctuation is cyclic in nature. For applications above 2500° F, the anchors can be made of inconel or other special metals.



### ARC STUD WELDED REFRACTORY ANCHOR - APPLICATION GUIDE (TABLE #2)

							Refrac	tory A	Ancho	r Style					
Appli	Application		ARC ST	ARC B-NT	ARC R-WH	ARC R-TS	RA R-2T	RA R-3T	RA R-C	RA UL	RA BH	RA Y	RA SP	RA T-PLT	RA EJ-801
	a) Reinforcing Bar														
Rebar & Mesh	b) Wire Mesh														
	c) Hex-Mesh Steel														
Block Insu	lation Only														
Concrete C	Concrete Construction														
	a) Castables														
Refractory	b) Plastics														
Construction	c) Gunning Mixes														
	d) Block Insulation														
Single	a) Under 5″ Thick														
Component Linings	b) Over 5″ Thick														
	a) Under 5″ Thick														
	b) Over 5″ Thick														
Two Component Linings	c) Brick Backing														
Linings	d) Castable Backing														
	e) Block nsulation Backing														



### HOW TO APPLY THE REFRACTORY ANCHOR

**ANCHOR LENGTH & SPACING:** All information given in this section is general and may vary according to special service conditions encountered. Therefore, this information should only be used as a guide.

The anchor length shown is the after-weld length of the longest section of the anchor. The lengths (in table #3 on the next page) are recommended to insure good refractory holding power, while preventing rapid oxidation of the anchor and preventing spalling of the refractory surface.

Generally the anchor length should be about 75% of the refractory depth, however, the end of the anchor should never be closer to the refractory hot face than 1". The anchor spacing will be determined by the type and density of the refractory used, and how and where it is to be applied.

For anchoring purposes, the refractory can be classified as LOW DENSITY (25-90 lbs. per cu. ft.) and HIGH DENSITY (100-200 lbs. per cu. ft.). High-density material can be used in one component linings of any thickness. Low-density material is only used in one component linings to a depth of 6". Frequently, in sections more than 6" thick, high-density material composes the working lining with a back up of low-density material.



### **REFRACTORY ANCHOR PLACEMENT (TABLE #3)**

Refractory Thickness	Anchor	Refractory	Center - Center Anchor Spacing				
mickness	Length	Density	Wall	Roof			
2"	۱"	Low High	2" x  2"  8" x  8"	9" x 9"  2" x  2"			
3"	2"	Low High	2" x  2"  8" x  8"	2" x  2"  8" x  8"			
4"	3"	Low High	2" x  2"  8" x  2"	2" x  2"  8" x  2"			
5"	3-1/2"	Low High	2" x  2"  8" x  2"	2" × 9"  8" ×  2"			
6"	4-1/2""	High Low	2" × 9"  8" ×  2"	9" × 9"  2" ×  2"			
7"	5"	High	18" x 12"	12" x 12"			
8"	6"	High	18" x 12"	12" x 12"			
9"	6-1/2"	High	18" x 12"	12" × 9"			
10"	7-1/2"	High	12" × 12"	12" × 9"			
11"	8"	High	12" x 12"	12" × 9"			
12"	9"	High	12" x 12"	12" × 9"			
13"	10"	High	12" x 12"	12" × 9"			

## **QUANTITY OF ANCHORS REQUIRED (TABLE #4)**

Anchor Spacing	9" X 9"	12" × 9"	12" X 12"	18" X 12"	18" X 18"
Anchors Required Per Square Foot	1.80	1.33	1.00	0.67	0.44

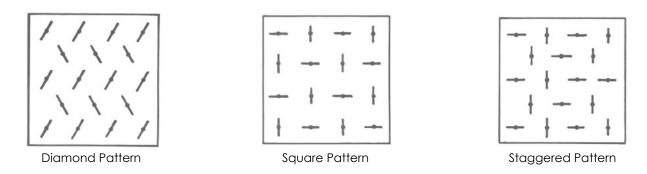


## **Refractory Anchors: Anchor Patterns**

### **REFRACTORY ANCHORS: ANCHOR PATTERNS**

### **ANCHOR PATTERNS**

The three anchor patterns (shown below) are in use today; the latter two being the more popular. The important factor is that an irregular pattern is achieved by opposing anchors so that secure retention of the refractory in all directions is achieved.



#### NOTE:

The expansion of the steel anchor is usually greater than that of the refractory material, especially in dense, high strength castables. Metallic refractory anchors can be coated with various materials that will burn off and allow room for the anchor to expand

Consult your refractory supplier for the proper refractory and coating material to meet your application needs.



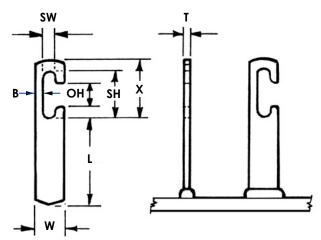
## **RT - RECTANGULAR "T" SLOT WELD STUDS - TECHNICAL DETAILS**

RT weld studs are available in mild steel and stainless steel materials.

RT studs are commonly used for securing wire mesh to furnaces. After installation, the mesh is filled with refractory material.

To stud weld RT studs, rectangular chucks, standard foot pieces and standard ferrule grips are typically used.

For application, dimensional and in stock assistance, please contact Sunbelt Stud Welding.



	Stud Specifications									
Thickness	Width	Length (Min.)	"T" Slot Det	'T" Slot Details						
Т	W	L	ОН	SH	Х	В	SW	P/N		
0.125	0.375	0.500	0.322	0.531	0.765	0.122	0.130	F037-R I		
0.125	0.625	0.500	0.500	1.000	1.250	0.185	0.255	F062-R1		

To order or specify give: Stud Code, T x W x L, Material and Quantity Example: RH, 0.125 x 0.625 x .75, (BW), mild steel, 1000 pcs. Specify (L) Length, on a Before Weld basis by indicating "BW" or on an After Weld basis by indicating "AW."

See Accessories for accessory detail and Ferrule Specifications for ferrule options.

See **Threaded and No-Thread Weld Studs – Technical Details** for industry specifications, thread options, Before Weld (BW) length, flux, raw material details, plating options, annealing, load strengths and shipping weights.



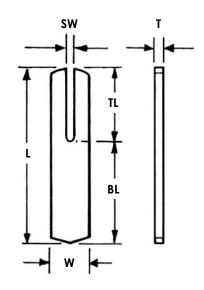
## **R2 - RECTANGULAR - 2 TINE WELD STUDS - TECHNICAL DETAILS**

R2 weld studs are available in mild steel and stainless steel materials.

R2 studs are used to secure refractory materials (blanket, block, cast, gunned and troweled) inside various types of furnaces and chimneys.

To stud weld R2 studs, rectangular chucks, standard foot pieces and standard ferrule grips are typically used.

For application, dimensional and in stock assistance, please contact Sunbelt Stud Welding.



	Stud Specifications							Standard Accessories		
Thickness	Width	Length (Min.)	Length (Min.)	Length (Min.)	Slot Width	Ferrule	Foot	Grip	Chuck	
т	w	L	BL	TL	SW	P/N	P/N	P/N	P/N	
0.125	0.375	1.250	0.250	1.000	0.125	F037-R1	B-IN	GN-037	CR-CB	
0.125	0.625	1.250	0.625	0.625	0.156	F062-R1	B-2N	GN-075	CR-CC	

To order or specify give: Stud Code, T x W x BL x TL, Material and Quantity Example: RA R2, 0.125 x 0.625 x 2 x 1, (BW), 304SS, 1000 pcs. Specify (L) Length, on a Before Weld basis by indicating "BW" or on an After Weld basis by indicating "AW."

See Rectangular Weld Stud specifications for the flash dimensions of R2 type studs.

See Accessories for accessory detail and Ferrule Specifications for ferrule options.



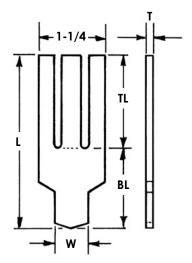
## **R3 - RECTANGULAR - 3 TINE WELD STUDS - TECHNICAL DETAILS**

R3 weld studs are available in mild steel and stainless steel materials.

R3 studs are used to secure refractory materials (blanket, block, cast, gunned and troweled) inside various types of furnaces and chimneys.

To stud weld R3 studs, rectangular chucks, standard foot pieces and standard ferrule grips are typically used.

For application, dimensional and in stock assistance, please contact Sunbelt Stud Welding.



	Stud Specifications						Stan	dard Access	ories	
Thickness	Width*	Length (Min.)	Length (Min.)	Length (Min.)	Slot Width	Ferrule	Foot	Grip	Chuck	
Т	w	L	BL	TL	SW	P/N	P/N	P/N	P/N	
0.125	0.625	2.250	1.250	1.000	0.156	F062-R1	B-2N	GN-075	CR-CB	
*Width rep	*Width represents weld base width.									

To order or specify give: Stud Type, T x W x BL x TL, Material and Quantity Example: R3, 0.125 x 0.625 x 1.50 x 2.5, (BW), Mild Steel, 1000 pcs. Specify (L) Length, on a Before Weld basis by indicating "BW" or on an After Weld basis by indicating "AW."

See Rectangular Weld Stud specifications for the flash dimensions of R3 type studs.

See Accessories for accessory detail and Ferrule Specifications for ferrule options.



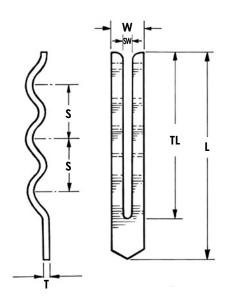
## **R2W - RECTANGULAR - 2 TINE WIGGLE WELD STUDS - TECHNICAL DETAILS**

R2W weld studs are available in mild steel and stainless steel materials.

Like the R2W studs, RW studs are used to secure refractory materials. The bends in the R2W stud help to preclude slippage of the refractory material when in service.

To stud weld RW studs, rectangular chucks, standard foot pieces and standard ferrule grips are typically used.

For application, dimensional and in stock assistance, please contact Sunbelt Stud Welding.



		Stud	Specificat	ions			Standard Accessories		
Thickness	Width	Length Range*	Tine Length**	Wiggle Length	Slot Width	Ferrule	Foot	Grip	Chuck
т	W	L	TL	S	SW	P/N	P/N	P/N	P/N
0.125	0.625	2.125 - 3.0	1.625	1.031	0.156	F062-R1	B-2N	GC-075	CR-CC
0.125	0.625	3.125 - 4.0	2.625	1.031	0.156	F062-R1	B-2C	GC-075	CR-CC
0.125	0.625	4.13 - 7.13	3.250	1.031	0.156	F062-R1	B-2C	GC-075	CR-CC
0.125	0.625	5.50 - 8.50	4.625	1.031	0.156	F062-R1	B-2C	GC-075	CR-CC
0.125	0.625	6.88 - 9.88	6.000	1.031	0.156	F062-R1	B-2C	GC-075	CR-CC
* For lengths	over 3", the sp	olit foot and spli	t grip accessor	ies are depicted	1.				

\*\* Tine Length determines whether 1, 2 or 3 wiggles will be provided.

To order or specify give: Stud Code, T x W x L, Material and Quantity Example: R2W, 0.125 x 0.625 x 6, (BW), mild steel, 3000 pcs. Specify (L) Length, on a Before Weld basis by indicating "BW" or on an After Weld basis by indicating "AW."

See RP Weld Stud specifications for the flash dimensions of RW type studs.

See Accessories for accessory detail and Ferrule Specifications for ferrule options.



## **RF - RECTANGULAR FIBER WELD STUDS - TECHNICAL DETAILS**

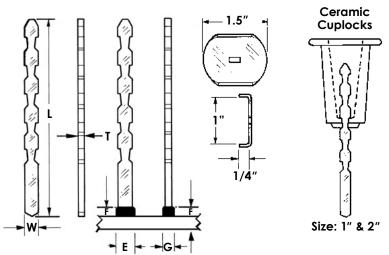
RF weld studs are available in mild steel and stainless steel materials. Material options and temperature limits are as follows:

304 SS - Temperature up to 1500 degrees F 310 SS - Temperature up to 1850 degrees F 330 SS - Temperature up to 2000 degrees F 601 Inconel - Temperature up to 2150 degrees F

RF studs are used to secure blanket insulation to furnaces. After the insulation is impaled over the RF studs, metal washers and or the ceramic cuplocks are installed and lock on the RF Stud to retain the insulation. The ceramic cuplock can be filled with refractory material or a ceramic plug.

Washers, ceramic cuplocks and cuplock plugs are sold separately. The RF stud and washer must be the same alloy.

For application, dimensional and in stock assistance, please contact Sunbelt Stud Welding.



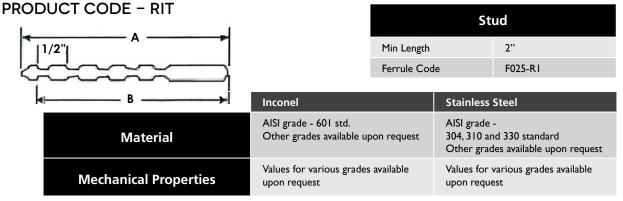
	Stud Specifications								ories
Thickness	Width	Length (Min.)	Flash Dimensions			Ferrule	Foot	Grip	Chuck
Т	w	L	E	F	G	P/N	P/N	P/N	P/N
0.125	0.250	1.500	0.300	0.109	0.218	F025-R1	B-IC	GC-037	CR-CA

To order or specify give: Stud Code, T x W x L, Material and Quantity Example: RIT (Insultwist Pin), 0.125 x 0.25 x 5.25, (BW), 601 Inconel, 3000 pcs. Specify (L) Length, on a Before Weld basis by indicating "BW" or on an After Weld basis by indicating "AW."

See Accessories for accessory detail and Ferrule Specifications for ferrule options.



### **REFRACTORY WELD STUDS: INSULTWIST**



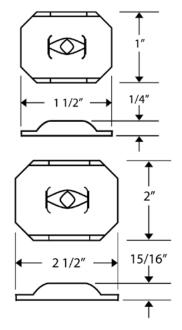
To order or specify give: Product Code, Length, Material and Quantity Example: RIT (Insultwist Pin), 2", Stainless Steel: 310, 1000 pcs.

Note: Washers are not a component part of studs.

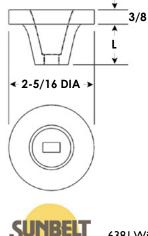
### LOCK WASHER **PRODUCT CODE - RIT WAS**

Application	Designed for 1/4 turn locking on to Sunbelt Insultwist refractory anchors.
Material	Stainless Steel: 304 Stainless Steel: 310 Stainless Steel: 330 Inconel: 601

To order or specify give: Product Code, Size, Material and Quantity Example: RIT WAS, 1 1/2", Stainless Steel: 310, 1000 pcs.



### INSULTWIST LOCK CUP PRODUCT CODE - RIT CUP



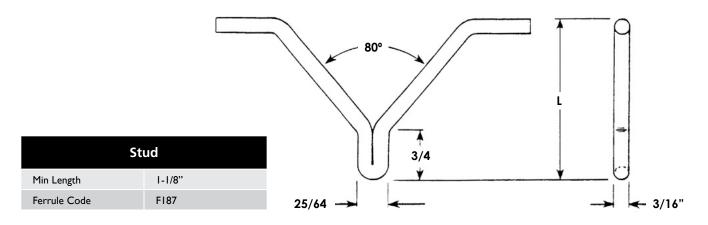
Application	Designed for 1/4 turn locking on to Sunbelt Insultwist refractory anchors.				
Material	Ceramic (High Temperature)				
Size	L Short - 1" Long: - 2"				

To order or specify give: Product Code, Size and Quantity Example: RIT CUP, Long: - 2", 1000 pcs.



# **Refractory Weld Studs: Bull Horn**

#### **REFRACTORY STUDS: BULL HORN**



	Mild Steel	Stainless Steel
Material	C23% max. P - 0.04% max. Mn - 0.90% max. S - 0.05% max.	AISI grade - 304, 310, 316 and 330 standard Other grades available upon request
Mechanical Properties	Tensile - 60,000 psi (min.) Yield - 50,000 psi (min.) Elongation - 20% (in 2 inches)	Values for various grades available upon request
Plating	Plating is not standard. Cadmium, Copper, Nickel and Zinc available upon customer request.	Does not apply to Stainless

#### To order or specify give: Product Code, Diameter: 3/16, Length: L, Material and Quantity Example: RBH, 3/16, 1-1/8", Mild Steel, 1000 pcs.

See Accessories for accessory detail and Ferrule Specifications for ferrule options.

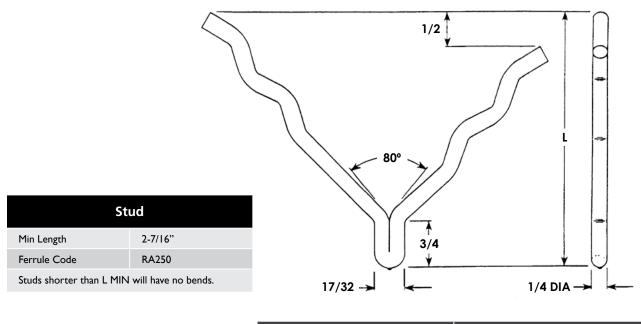
See **Threaded and No-Thread Weld Studs – Technical Details** for industry specifications, thread options, Before Weld (BW) length, flux, raw material details, plating options, annealing, load strengths and shipping weights.



# **Refractory Weld Studs: "Y" Anchor**

#### **REFRACTORY STUDS: "Y" ANCHOR**

Product Code: RA Y



	Mild Steel	Stainless Steel
Material	C23% max. P - 0.04% max. Mn - 0.90% max. S - 0.05% max.	AISI grade - 304, 310, 316 and 330 standard Other grades available upon request
Mechanical Properties	Tensile - 60,000 psi (min.) Yield - 50,000 psi (min.) Elongation - 20% (in 2 inches)	Values for various grades available upon request

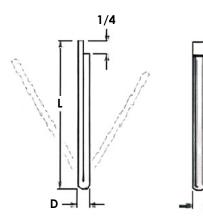
#### To order or specify give: Stud Code, Diameter 1/4", Length: L, Material and Quantity Example: RA Y, 1/4", 2-7/16', Mild Steel, 1000 pcs.

See Accessories for accessory detail and Ferrule Specifications for ferrule options.



### **REFRACTORY STUDS: SPLIT PIN**

Product Code: RA SP



Stud					
D	Min Length	Ferrule Code			
3/16"	7/8"	P250			
1/4"	7/8"	P312			
5/16"	7/8"	P375			

	Mild Steel	Stainless Steel
Material	C23% max. P - 0.04% max. Mn - 0.90% max. S - 0.05% max.	AISI grade - 302, 304, and 305 standard Other grades available upon request
Mechanical Properties	Tensile - 60,000 psi (min.) Yield - 50,000 psi (min.) Elongation - 20% (in 2 inches)	Values for various grades available upon request
Plating	Plating is not standard. Cadmium, Copper, Nickel and Zinc available upon customer request.	Does not apply to Stainless

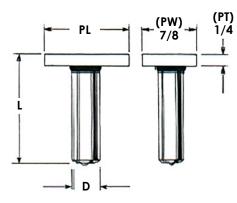
#### To order or specify give: Product Code, Diameter, Length, Material and Quantity Example: RA SP, 3/16", 7/8", Mild Steel, 1000 pcs.

See Accessories for accessory detail and Ferrule Specifications for ferrule options.



#### **REFRACTORY STUDS: "T" PLATE**

Product Code: RA T-PLT



Stud						
D	L Min Length	PL	Ferrule Code			
3/8"	I-I/8"	2-1/2"	F375			
3/8'	I-1/8"	3"				
1/2"	I-1/8"	2-1/2"	F500			
1/2"	I-I/8"	3"				

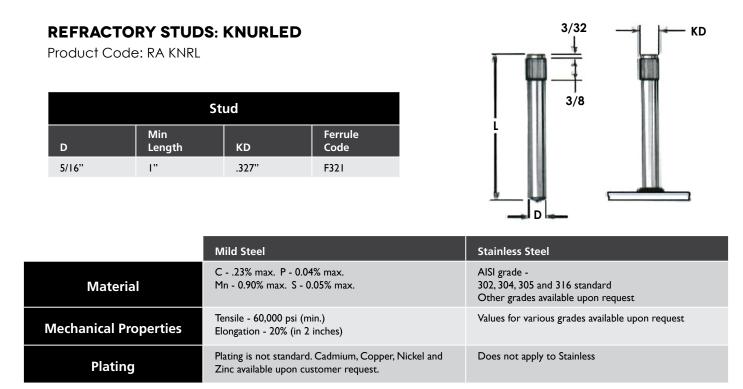
	Mild Steel	Stainless Steel
Material	C23% max. P - 0.04% max. Mn - 0.90% max. S - 0.05% max.	AISI grade - 302, 304, and 305 standard Other grades available upon request
Mechanical Properties	Tensile - 60,000 psi (min.) Yield - 50,000 psi (min.) Elongation - 20% (in 2 inches)	Values for various grades available upon request
Plating	Plating is not standard. Cadmium, Copper, Nickel and Zinc available upon customer request.	Does not apply to Stainless

#### To order or specify give: Product Code, Diameter: D, Length: L, Plate Length: PL, Material and Quantity Example: RA T-PLT, 3/8, 1-1/8", 2-1/2, Mild Steel, 3000 pcs.

See Accessories for accessory detail and Ferrule Specifications for ferrule options.



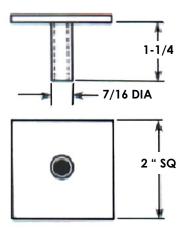
# **Refractory Weld Studs: Knurled & Refractory Anchor: Drive Plate**



To order or specify give: Product Code, Diameter: D, Length: L, Material and Quantity Example: RA KNRL, 5/16", 1", Mild Steel, 2500 pcs.

### **REFRACTORY ANCHOR: DRIVE PLATE**

Product Code: 183-1000-04



Application	Designed to lock on to Sunbelt Stud Welding 5/16" diameter Knurled Studs.			
Mild Steel Material				
Drive plate: Sold separately. Not a component part of stud.				
To order or specify give: Product Code, Quantity Example: 183-1000-04, 5/16", 2500 pcs.				

See Accessories for accessory detail and Ferrule Specifications for ferrule options.



### **MISCELLANEOUS REFRACTORY ANCHORS - GENERAL SPECIFICATIONS**

Miscellaneous Anchors	This catalog section lists some of the most often used "non-stud-welded" or "miscellaneous" refractory anchors available. The technical representatives at Sunbelt can provide information on the availability of other standard refractory anchors and also assist you in designing a special anchor to meet your refractory fastening requirements.
Materials	Miscellaneous Refractory Anchors are generally available in the following materials: I. Low Carbon Steel 2. Stainless Steel – types 304, 310 & 330, and 3. Inconel 601 Other materials are available by special order.
To order or specify	<ul> <li>I. Product Code - RA EJ-000 (found in top-right corner of page)</li> <li>2. Dash Number -00 (found in left side column of chart)</li> <li>3. Material - (as required)</li> <li>The dimensions shown in the charts represent the most commonly used sizes, however, these refractory anchors can be manufactured to the dimensions required for your application.</li> <li>To order special sizes, replace the Dash Number with – (NS) and give your required dimensions.</li> <li>Example: <ol> <li>RA EJ-261</li> <li>-(NS) A = 3 1/2", all other dimensions same as (-01)</li> </ol> </li> </ul>



### RA EJ-261

Anchor						
Dash Number	А	В	с	D	E	
-01	3"	۱"	3/16	1/2	1/2	
-02	4"	l"	3/16	1/2	1/2	
-03	5"	Ι"	3/16	1/2	1/2	
-04	6"	l"	3/16	1/2	1/2	
-05	6-3/4"	l"	3/16	1/2	1/2	

Miscellaneous Refractory Anchors are generally available in the following materials:

1. Low Carbon Steel

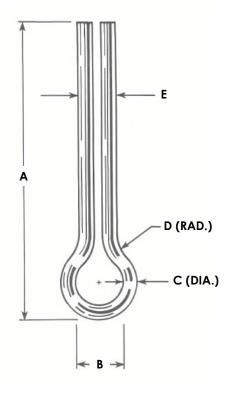
2. Stainless Steel – types 304, 310 & 330, and

3. Inconel 601

Other materials are available by special order.

The dimensions shown in the charts represent the most commonly used sizes, however, these refractory anchors can be manufactured to the dimensions required for your application.

To order special sizes, replace the Dash Number with – (NS) and give your required dimensions.

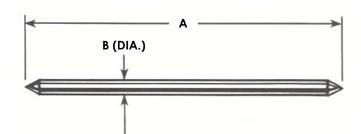


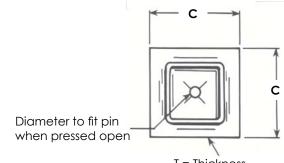
#### To order or specify give: Stud Code, Dash Number, Material and Quantity Example: RA EJ-261, -03, Stainless Steel 310, 750 pcs.

See Accessories for accessory detail and Ferrule Specifications for ferrule options.



RA EJ-265





T = Thickness

Anchor			Was	sher
Dash Number	А	В	с	т
-01	2-1/8	1/8	1-1/2	20 GA
-02	4-1/8	1/8	1-1/2	20 GA
-03	2-1/8	3/16	1-1/2	20 GA
-04	4-1/8	3/16	1-1/2	20 GA
-05	2-1/8	1/4	2-1/2	20 GA
-06	4-1/8	I/4	2-1/2	20 GA
-07	5"	10 GA	1-1/2	20 GA
-08	3"	3/16	1-1/2	20 GA
-09	2-5/8	10 GA	1-1/2	20 GA
-10	4-5/8	1/8	1-1/2	20 GA

Miscellaneous Refractory Anchors are generally available in the following materials:

1. Low Carbon Steel

2. Stainless Steel – types 304, 310 & 330, and

3. Inconel 601

Other materials are available by special order.

The dimensions shown in the charts represent the most commonly used sizes, however, these refractory anchors can be manufactured to the dimensions required for your application.

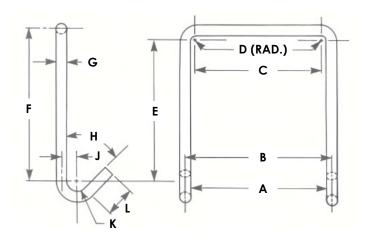
To order special sizes, replace the Dash Number with - (NS) and give your required dimensions.

To order or specify give: Stud Code, Dash Number, Material and Quantity Example: RA EJ-265, -02, Stainless Steel 310, 750 pcs.

See Accessories for accessory detail and Ferrule Specifications for ferrule options.



**RA EJ-268** 



Anchor											
Dash Number	А	В	с	D	E	F	G	н	J	К	L
-01	3-5/16	3-9/16	3-1/16	1/8	3-7/16	3-11/16	1/4	45°	3/8	1/4	3/4
-02	3-3/16	3-7/16	2-15/16	1/8	4-1/2	4-3/4	1/4	60°	1/4	1/8	3/4
-03	3-5/8	4"	3"	5/16	4-3/16	4-11/16	3/8	60°	1/2	5/16	3/4

Miscellaneous Refractory Anchors are generally available in the following materials:

1. Low Carbon Steel

2. Stainless Steel – types 304, 310 & 330, and

3. Inconel 601

Other materials are available by special order.

The dimensions shown in the charts represent the most commonly used sizes, however, these refractory anchors can be manufactured to the dimensions required for your application.

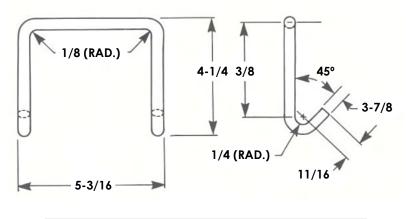
To order special sizes, replace the Dash Number with - (NS) and give your required dimensions.

#### To order or specify give: Stud Code, Dash Number, Material and Quantity Example: RA EJ-268, -03, Stainless Steel 310, 750 pcs.

See Accessories for accessory detail and Ferrule Specifications for ferrule options.



**RA EJ-269** 



Anchor				
Dash Number Dimensions				
-01 (see above)				

Miscellaneous Refractory Anchors are generally available in the following materials:

1. Low Carbon Steel

2. Stainless Steel – types 304, 310 & 330, and

3. Inconel 601

Other materials are available by special order.

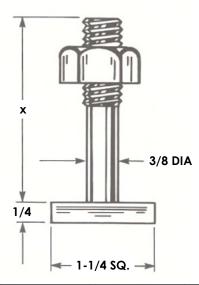
The dimensions shown in the charts represent the most commonly used sizes, however, these refractory anchors can be manufactured to the dimensions required for your application.

To order special sizes, replace the Dash Number with – (NS) and give your required dimensions.

#### To order or specify give: Stud Code, Dash Number, Material and Quantity Example: RA EJ-269, -01, Stainless Steel 310, 750 pcs.

See Accessories for accessory detail and Ferrule Specifications for ferrule options.





Anchor								
Dash Number	x	Number	х	Dash Number	x	Number	х	
-01	2	17	6	-09	4	25	8	
-02	2-1/4	18	6-1/4	-10	4-1/4	26	8-1/4	
-03	2-1/2	19	6-1/2	-11	4-1/2	27	8-1/2	
-04	2-3/4	20	6-3/4	-12	4-3/4	28	8-3/4	
-05	3	21	7	-13	5	29	9	
-06	3-1/4	22	7-1/4	-14	5-1/4	30	9-1/4	
-07	3-1/2	23	7-1/2	-15	5-1/2	31	9-1/2	
-08	3-3/4	24	7-3/4	-16	5-3/4	32	9-3/4	

Miscellaneous Refractory Anchors are generally available in the following materials:

1. Low Carbon Steel

2. Stainless Steel – types 304, 310 & 330, and

3. Inconel 601

Other materials are available by special order.

The dimensions shown in the charts represent the most commonly used sizes, however, these refractory anchors can be manufactured to the dimensions required for your application.

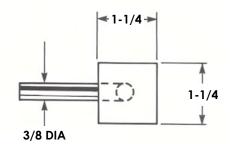
To order special sizes, replace the Dash Number with – (NS) and give your required dimensions.

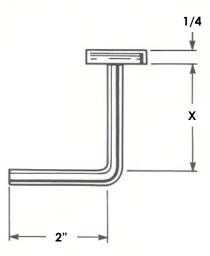
#### To order or specify give: Stud Code, Dash Number, Material and Quantity Example: RA EJ-270, -05, Stainless Steel 310, 750 pcs.

See Accessories for accessory detail and Ferrule Specifications for ferrule options.



	Anchor								
Dash Number	Dimension X	Dash Number	Dimension X						
-01	1-9/16	-18	5-13/16						
-02	1-13/16	-19	6-1/16						
-03	2-1/16	-20	6-5/16						
-04	2-5/16	-21	6-9/16						
-05	2-9/16	-22	6-13/16						
-06	2-13/16	-23	7-1/16						
-07	3-1/16	-24	7-5/16						
-08	3-5/16	-25	7-9/16						
-09	3-9/16	-26	7-13/16						
-10	3-13/16	-27	8-1/16						
-11	4-1/16	-28	8-5/16						
-12	4-5/16	-29	8-9/16						
-13	4-9/16	-30	8-13/16						
-14	4-13/16	-31	9-1/16						
-15	5-1/16	-32	9-5/16						
-16	5-5/16	-33	9-9/16						
-17	5-9/16	-34	9-13/16						





Miscellaneous Refractory Anchors are generally available in the following materials:

1. Low Carbon Steel

2. Stainless Steel – types 304, 310 & 330, and

3. Inconel 601

Other materials are available by special order.

The dimensions shown in the charts represent the most commonly used sizes, however, these refractory anchors can be manufactured to the dimensions required for your application.

To order special sizes, replace the Dash Number with – (NS) and give your required dimensions.

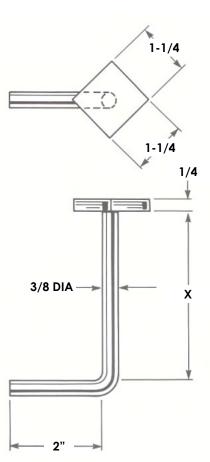
To order or specify give: Stud Code, Dash Number, Material and Quantity Example: RA EJ-271, -09, Stainless Steel 310, 750 pcs.

See Accessories for accessory detail and Ferrule Specifications for ferrule options.



#### RA EJ-272

Anchor								
Dash Number	Dimension X	Dash Number	Dimension X					
-01	1-1/16	-18	5-5/16					
-02	1-5/16	-19	5-9/16					
-03	1-9/16	-20	5-13/16					
-04	1-13/16	-21	6-1/16					
-05	2-1/16	-22	6-5/16					
-06	2-5/16	-23	6-9/16					
-07	2-9/16	-24	6-13/16					
-08	2-13/16	-25	7-1/16					
-09	3-1/16	-26	7-5/16					
-10	3-5/16	-27	7-9/16					
-11	3-9/16	-28	7-13/16					
-12	3-13/16	-29	8-1/16					
-13	4-1/16	-30	8-5/16					
-14	4-5/16	-31	8-9/16					
-15	49/16	-32	8-13/16					
-16	4-13/16	-33	9-1/16					
-17	5-1/16							



Miscellaneous Refractory Anchors are generally available in the following materials:

1. Low Carbon Steel

2. Stainless Steel – types 304, 310 & 330, and

3. Inconel 601

Other materials are available by special order.

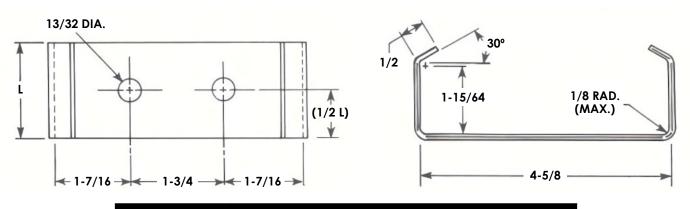
The dimensions shown in the charts represent the most commonly used sizes, however, these refractory anchors can be manufactured to the dimensions required for your application.

To order special sizes, replace the Dash Number with - (NS) and give your required dimensions.

#### To order or specify give: Stud Code, Dash Number, Material and Quantity Example: RA EJ-272, -12, Stainless Steel 310, 750 pcs.

See Accessories for accessory detail and Ferrule Specifications for ferrule options.





Anchor								
Dash Number	Thickness	L (Inches)	Steel Type					
-01	3 GA.	2-1/2	CARBON					
-02	II GA.	2-1/2	CARBON					
-03	3 GA.	1-1/2	304 SS					
-04	II GA.	1-1/2	304 SS					
-05	3 GA.	1-1/2	309 SS					
-06	II GA.	1-1/2	309 SS					
-07	3 GA.	1-1/2	310 SS					
-08	II GA.	1-1/2	310 SS					
-09	3 GA.	1-1/2	316 SS					
-10	II GA.	1-1/2	316 SS					

Miscellaneous Refractory Anchors are generally available in the following materials:

1. Low Carbon Steel

2. Stainless Steel – types 304, 310 & 330, and

3. Inconel 601

Other materials are available by special order.

The dimensions shown in the charts represent the most commonly used sizes, however, these refractory anchors can be manufactured to the dimensions required for your application.

To order special sizes, replace the Dash Number with - (NS) and give your required dimensions.

#### To order or specify give: Stud Code, Dash Number, Material and Quantity Example: RA EJ-273, -04, Stainless Steel 310, 750 pcs.

See Accessories for accessory detail and Ferrule Specifications for ferrule options.



### RA EJ-276

Washer						
Dash Number	Α	Product Code*				
-01	1/4"	WCN K150S B 1/4				
-02	3/16"	WCN K150SB 3/16				
-03	UL**	WCN KI50SB (IT)				

Miscellaneous Refractory Anchors are generally available in the following materials:

1. Low Carbon Steel

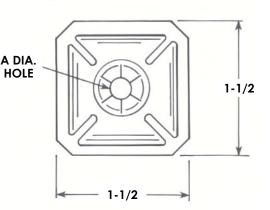
2. Stainless Steel – types 304, 310 & 330, and

3. Inconel 601

Other materials are available by special order.

The dimensions shown in the charts represent the most commonly used sizes, however, these refractory anchors can be manufactured to the dimensions required for your application.

To order special sizes, replace the Dash Number with – (NS) and give your required dimensions.



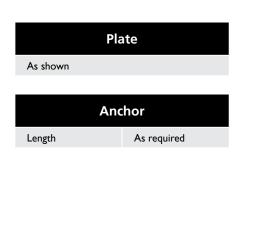


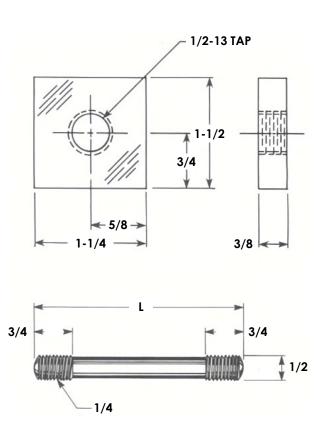
To order or specify give: Stud Code, Dash Number, Material and Quantity Example: RA EJ-276, -01, Stainless Steel 310, 750 pcs.

See Accessories for accessory detail and Ferrule Specifications for ferrule options.



#### RA EJ-353





Miscellaneous Refractory Anchors are generally available in the following materials:

- 1. Low Carbon Steel
- 2. Stainless Steel types 304, 310 & 330, and
- 3. Inconel 601

Other materials are available by special order.

The dimensions shown in the charts represent the most commonly used sizes, however, these refractory anchors can be manufactured to the dimensions required for your application.

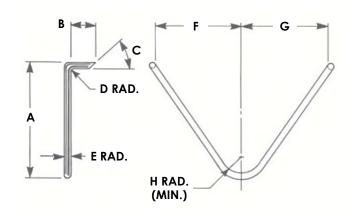
To order special sizes, replace the Dash Number with - (NS) and give your required dimensions.

To order or specify give: Stud Code, Length, Dash Number, Material and Quantity Example: RA EJ-353, 1", -01, Stainless Steel 310, 750 pcs.

See Accessories for accessory detail and Ferrule Specifications for ferrule options.



RA EJ-611



				Anchor				
Number	А	В	С	D	E	F	G	н
-01	1-1/2	3/4	45°	1/8	1/8	2-1/4	2-1/4	5/8
-02	2-1/4	3/4	45°	1/8	1/8	2-1/4	2-1/4	5/8
-03	3-1/4	3/4	45°	1/8	1/8	2-1/4	2-1/4	5/8
-04	4-1/4	3/4	45°	1/8	1/8	2-1/4	2-1/4	5/8
-05	5-1/4	3/4	45°	1/8	1/8	2-1/4	2-1/4	5/8
-06	3-5/16	7/8	45°	1/8	1/8	2-1/4	2-1/4	5/8
-07	4-11/16	7/8	45°	1/8	1/8	2-1/4	2-1/4	5/8

Miscellaneous Refractory Anchors are generally available in the following materials:

1. Low Carbon Steel 2. Stainless Steel – types 304, 310 & 330, and

3. Inconel 601

Other materials are available by special order.

The dimensions shown in the charts represent the most commonly used sizes, however, these refractory anchors can be manufactured to the dimensions required for your application.

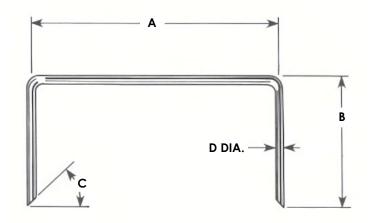
To order special sizes, replace the Dash Number with – (NS) and give your required dimensions.

#### To order or specify give: Stud Code, Dash Number, Material and Quantity Example: RA EJ-611, -04, Stainless Steel 310, 750 pcs.

See Accessories for accessory detail and Ferrule Specifications for ferrule options.



**RA EJ-612** 



Anchor							
Dash Number	А	В	с	D			
-01	2-1/2	2-1/4	45°	1/8			
-02	4-1/2	2-1/4	45°	1/8			

Miscellaneous Refractory Anchors are generally available in the following materials:

- 1. Low Carbon Steel
- 2. Stainless Steel types 304, 310 & 330, and
- 3. Inconel 601

Other materials are available by special order.

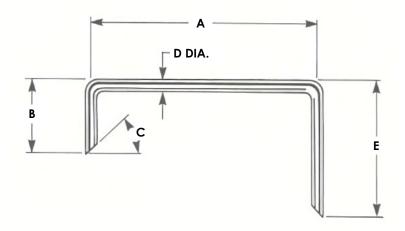
The dimensions shown in the charts represent the most commonly used sizes, however, these refractory anchors can be manufactured to the dimensions required for your application.

To order special sizes, replace the Dash Number with - (NS) and give your required dimensions.

#### To order or specify give: Stud Code, Dash Number, Material and Quantity Example: RA EJ-612, -01, Stainless Steel 310, 750 pcs.

See Accessories for accessory detail and Ferrule Specifications for ferrule options.





Anchor								
Dash Number	А	В	с	D	E			
-01	3	1-1/4	45°	3/16	2-1/4			
-02	4	1-1/4	45°	3/16	2-1/4			
-03	5	1-1/4	45°	3/16	2-1/4			
-04	5-1/2	1-1/4	45°	3/16	2-1/4			

Miscellaneous Refractory Anchors are generally available in the following materials:

1. Low Carbon Steel

2. Stainless Steel – types 304, 310 & 330, and

3. Inconel 601

Other materials are available by special order.

The dimensions shown in the charts represent the most commonly used sizes, however, these refractory anchors can be manufactured to the dimensions required for your application.

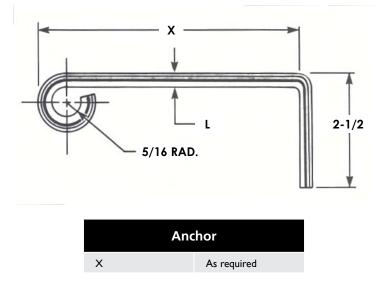
To order special sizes, replace the Dash Number with - (NS) and give your required dimensions.

To order or specify give: Stud Code, Dash Number, Material and Quantity Example: RA EJ-613, -03, Stainless Steel 310, 750 pcs.

See Accessories for accessory detail and Ferrule Specifications for ferrule options.



**RA EJ-614** 



Miscellaneous Refractory Anchors are generally available in the following materials: 1. Low Carbon Steel

2. Stainless Steel - types 304, 310 & 330, and

3. Inconel 601

Other materials are available by special order.

The dimensions shown in the charts represent the most commonly used sizes, however, these refractory anchors can be manufactured to the dimensions required for your application.

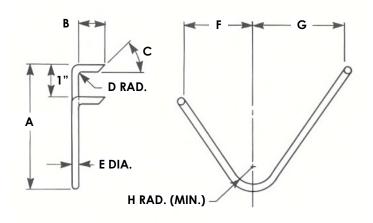
To order special sizes, replace the Dash Number with – (NS) and give your required dimensions.

#### To order or specify give: Stud Code, X, Material and Quantity Example: RA EJ-614, 1", Stainless Steel 310, 750 pcs.

See Accessories for accessory detail and Ferrule Specifications for ferrule options.



**RA EJ-615** 

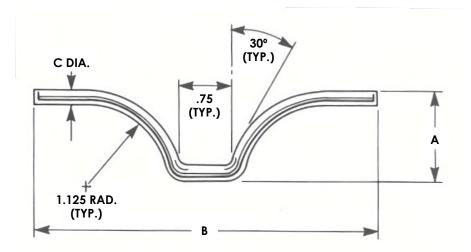


Anchor								
Dash Number	Α	В	С	D	E	F	G	Н
-01	1-1/2	3/4	45°	I/8	I/8	I-5/8	2-1/4	5/8
-02	2-1/4	3/4	45°	1/8	1/8	I-5/8	2-1/4	5/8
-03	3-1/4	3/4	45°	1/8	I/8	I-5/8	2-1/4	5/8
-04	4-1/4	3/4	45°	1/8	I/8	I-5/8	2-1/4	5/8
-05	5-1/4	3/4	45°	1/8	I/8	I-5/8	2-1/4	5/8
-06	3-5/16	7/8	45°	I/8	1/8	I-5/8	2-1/4	5/8
-07	4-11/16	7/8	45°	I/8	1/8	I-5/8	2-1/4	5/8

To order or specify give: Stud Code, Dash Number, Material and Quantity Example: RA EJ-615, -03, Stainless Steel 310, 750 pcs.

See Accessories for accessory detail and Ferrule Specifications for ferrule options.





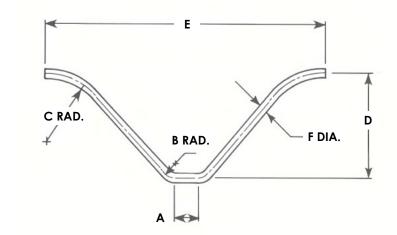
Anchor								
Dash Number	А	В	с	Dash Number	A	В	с	
-01	I	4.73	3/16	-12	- I	4.73	1/4	
-02	1.5	5.30	3/16	-13	1.5	5.30	1/4	
-03	2	5.88	3/16	-14	2	5.88	1/4	
-04	2.5	6.45	3/16	-15	2.5	6.45	1/4	
-05	3	7.03	3/16	-16	3	7.03	1/4	
-06	3.5	7.61	3/16	-17	3.5	7.61	I/4	
-07	4	8.18	3/16	-18	4	8.18	I/4	
-08	4.5	8.76	3/16	-19	4.5	8.76	1/4	
-09	5	9.33	3/16	-20	5	9.33	I/4	
-10	5.5	9.91	3/16	-21	5.5	9.91	I/4	
-11	6	10.4	3/16	-22	6	10.4	1/4	

To order or specify give: Stud Code, Dash Number, Material and Quantity Example: RA EJ-730, -01, Stainless Steel 310, 750 pcs.

See Accessories for accessory detail and Ferrule Specifications for ferrule options.







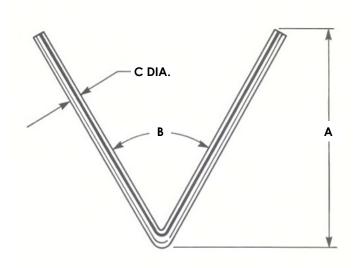
			Anchor			
Dash Number	А	В	с	D	E	F
-01	7/16	5/16	I-3/8	3/4	5-3/4	3/16
-02	7/16	5/16	I-3/8	1	5-3/4	3/16
-03	7/16	5/16	I-3/8	1-1/2	5-3/4	3/16
-04	7/16	5/16	I-3/8	2	5-3/4	3/16
-05	7/16	5/16	I-3/8	2-1/4	5-3/4	3/16
-06	1/2	1/2	1-1/2	2-1/2	6	3/16
-07	1/2	1/2	2-1/4	3	7	3/16
-08	1/2	1/2	1-1/2	3-1/2	6	3/16
-09	1/2	1/2	2-1/4	3-1/2	7-3/4	3/16
-10	3/4	3/4	2	3-3/4	8	3/16
-11	1/2	1/2	2-1/4	4-1/2	8	3/16
-12	3/4	3/4	2-1/4	5	9-15/16	3/16
-13	3/4	3/4	2	3-3/4	8	1/4
-14	3/4	3/4	2	4	8	1/4
-15	3/4	3/4	2-1/2	4-1/2	8-1/2	1/4
-16	3/4	3/4	4	6	11-1/2	5/16

To order or specify give: Stud Code, Dash Number, Material and Quantity Example: RA EJ-731, -09, Stainless Steel 310, 750 pcs.

See Accessories for accessory detail and Ferrule Specifications for ferrule options.



**RA EJ-732** 



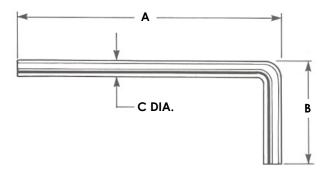
	Anchor								
Dash Number	А	В	С						
-01	1	60°	3/16						
-02	1-1/2	60°	3/16						
-03	2	60°	3/16						
-04	3	60°	3/16						
-05	4	60°	3/16						
-06	5	60°	3/16						
-07	6	60°	3/16						

To order or specify give: Stud Code, Dash Number, Material and Quantity Example: RA EJ-732, -05, Stainless Steel 310, 750 pcs.

See Accessories for accessory detail and Ferrule Specifications for ferrule options.



**RA EJ-733** 



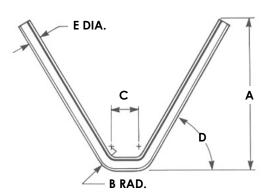
	Anchor									
Dash Number	A	В	с	Dash Number	А	В	с			
-01	1	1-1/2	3/16	-19	I	1-1/2	I/4			
-02	1-1/2	1-1/2	3/16	-20	1-1/2	1-1/2	I/4			
-03	1-3/4	1-1/2	3/16	-21	I-3/4	1-1/2	I/4			
-04	2	1-1/2	3/16	-22	2	1-1/2	I/4			
-05	2-1/2	1-1/2	3/16	-23	2-1/2	1-1/2	1/4			
-06	3	1-1/2	3/16	-24	3	1-1/2	1/4			
-07	4	1-1/2	3/16	-25	4	1-1/2	1/4			
-08	4-1/2	1-1/2	3/16	-26	4-1/2	1-1/2	1/4			
-09	5	1-1/2	3/16	-27	5	1-1/2	1/4			
-10	5-1/2	1-1/2	3/16	-28	5-1/2	1-1/2	1/4			
-11	6	1-1/2	3/16	-29	6	1-1/2	1/4			
-12	6-1/2	1-1/2	3/16	-30	6-1/2	1-1/2	1/4			
-13	7	1-1/2	3/16	-31	7	1-1/2	1/4			
-14	7-1/2	1-1/2	3/16	-32	7-1/2	1-1/2	1/4			
-15	7-3/4	1-1/2	3/16	-33	7-3/4	1-1/2	1/4			
-16	8-1/2	1-1/2	3/16	-34	8-1/2	1-1/2	1/4			
-17	9	1-1/2	3/16	-35	9	1-1/2	1/4			
-18	9-1/2	1-1/2	3/16	-36	9-1/2	1-1/2	I/4			

To order or specify give: Stud Code, Dash Number, Material and Quantity Example: RA EJ-733, -05, Stainless Steel 310, 750 pcs.

See Accessories for accessory detail and Ferrule Specifications for ferrule options.



**RA EJ-734** 



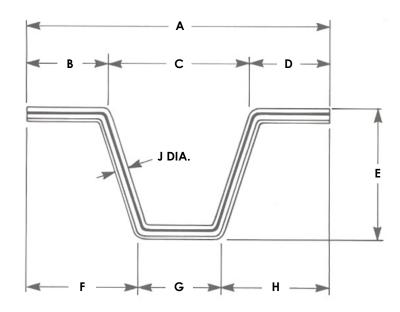
	Anchor									
Dash Number	A	В	с	D	E					
-01	2	3/4	3/4	60°	1/8					
-02	3	3/4	3/4	60°	1/8					
-03	6-1/2	3/4	3/4	60°	1/8					
-04	1-1/2	3/4	3/4	60°	3/16					
-05	2	3/4	3/4	60°	3/16					
-06	2-1/4	3/4	3/4	60°	3/16					
-07	2-3/4	3/4	3/4	60°	3/16					
-08	3-3/4	3/4	3/4	60°	3/16					
-09	4-1/2	3/4	3/4	60°	3/16					
-10	5-1/2	3/4	3/4	60°	3/16					
-11	6-1/2	3/4	3/4	60°	3/16					
-12	1-1/2	3/4	3/4	60°	1/4					
-13	2-1/4	3/4	3/4	60°	1/4					
-14	2-3/4	3/4	3/4	60°	1/4					
-15	3-3/4	3/4	3/4	60°	1/4					
-16	4-1/2	3/4	3/4	60°	1/4					
-17	5-1/2	3/4	3/4	60°	1/4					
-18	6-1/2	3/4	3/4	60°	1/4					

To order or specify give: Stud Code, Dash Number, Material and Quantity Example: RA EJ-734, -01, Stainless Steel 310, 750 pcs.

See Accessories for accessory detail and Ferrule Specifications for ferrule options.



**RA EJ-735** 



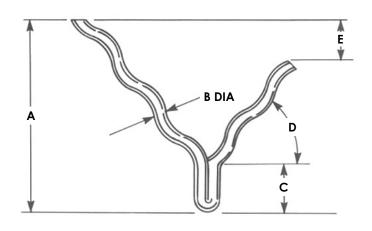
	Anchor									
Dash Number	А	В	с	D	E	F	G	н	L	
-01	6	1-1/2	3	1-1/2	2-1/4	2-1/4	1-1/2	2-1/4	3/16	
-02	6	1-1/2	3	1-1/2	3-1/4	2-1/4	1-1/2	2-1/4	3/16	
-03	6	1-1/2	3	1-1/2	3-1/2	2-1/4	1-1/2	2-1/4	3/16	
-04	6	1-1/2	3	1-1/2	5	2-1/4	1-1/2	2-1/4	3/16	
-05	6	1-1/2	3	1-1/2	6-1/4	2-1/4	1-1/2	2-1/4	3/16	
-06	6	1-1/2	3	1-1/2	8-1/2	2-1/4	1-1/2	2-1/4	3/16	
-07	7	I-3/4	3-1/2	I-3/4	3-1/2	2-3/4	1-1/2	2-3/4	3/16	

To order or specify give: Stud Code, Dash Number, Material and Quantity Example: RA EJ-735, -01, Stainless Steel 310, 750 pcs.

See Accessories for accessory detail and Ferrule Specifications for ferrule options.



**RA EJ-737** 

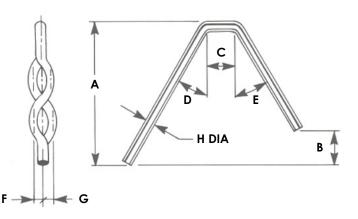


	Anchor									
Dash Number	А	В	С	D	E					
-01	2	1/4	3/4	50°	1/2					
-02	2-5/8	1/4	3/4	50°	1/2					
-03	3-1/8	1/4	3/4	50°	1/2					
-04	3-5/8	1/4	3/4	50°	1/2					
-05	4-1/8	1/4	3/4	50°	1/2					
-06	5	1/4	3/4	50°	1/2					
-07	5-1/8	1/4	3/4	50°	1/2					
-08	7-1/8	1/4	3/4	50°	1/2					
-09	2-5/8	5/16	3/4	50°	1/2					
-10	3-1/8	5/16	3/4	50°	1/2					
-11	3-5/8	5/16	3/4	50°	1/2					
-12	4-1/8	5/16	3/4	50°	1/2					
-13	4-5/8	5/16	3/4	50°	1/2					
-14	5-1/8	5/16	3/4	50°	1/2					
-15	7-1/8	5/16	3/4	50°	1/2					

To order or specify give: Stud Code, Dash Number, Material and Quantity Example: RA EJ-737, -07, Stainless Steel 310, 750 pcs.

See Accessories for accessory detail and Ferrule Specifications for ferrule options.



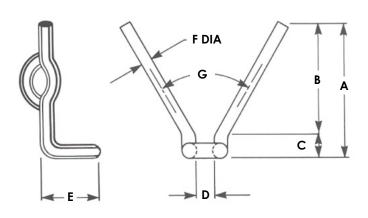


				Anchor				
Dash Number	А	В	с	D	E	F	G	н
-01	- /4	1/2	3/4	30°	30°	3/16	3/16	3/16
-02	2-1/4	1/2	3/4	30°	30°	3/16	3/16	3/16
-03	2-3/4	1/2	3/4	30°	30°	3/16	3/16	3/16
-04	3-3/4	1/2	3/4	30°	30°	3/16	3/16	3/16
-05	4-3/4	1/2	3/4	30°	30°	3/16	3/16	3/16
-06	5-3/4	1/2	3/4	30°	30°	3/16	3/16	3/16
-07	6-3/4	1/2	3/4	30°	30°	3/16	3/16	3/16
-08	1-1/4	1/2	3/4	30°	30°	3/16	3/16	1/4
-09	2-1/4	1/2	3/4	30°	30°	3/16	3/16	1/4
-10	2-3/4	1/2	3/4	30°	30°	3/16	3/16	1/4
-11	3-3/4	1/2	3/4	30°	30°	3/16	3/16	1/4
-12	4-3/4	1/2	3/4	30°	30°	3/16	3/16	I/4
-13	5-3/4	1/2	3/4	30°	30°	3/16	3/16	1/4
-14	6-3/4	1/2	3/4	30°	30°	3/16	3/16	I/4

To order or specify give: Stud Code, Dash Number, Material and Quantity Example: RA EJ-738, -08, Stainless Steel 310, 750 pcs.

See Accessories for accessory detail and Ferrule Specifications for ferrule options.



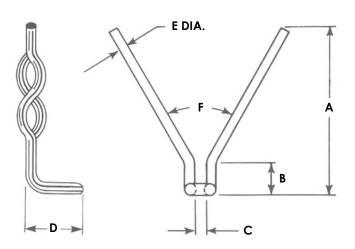


	Anchor									
Dash Number	A	В	с	D	E	F	G			
-01	2-5/8	2-1/8	1/2	.406	1-1/4	I/4	60°			
-02	3-1/8	2-5/8	1/2	.406	- /4	I/4	60°			
-03	4-1/8	3-1/8	I	.406	- /4	I/4	60°			
-04	5-1/8	4-1/8	I	.406	- /4	I/4	60°			
-05	6-1/8	5-1/8	1	.406	- /4	I/4	60°			
-06	2-1/8	2-1/8		.406	- /4	5/16	60°			
-07	2-1/2	2	1/2	.406	- /4	5/16	60°			
-08	2-5/8	2-5/8		.406	- /4	5/16	60°			
-09	3-1/8	3-1/8		.406	- /4	5/16	60°			
-10	3-5/8	3-5/8	1	.406	- /4	5/16	60°			
-11	3	2-1/2	1/2	.406	1-1/4	5/16	60°			
-12	3-1/2	2-1/2	1	.406	1-1/4	5/16	60°			
-13	4	3	I	.406	1-1/4	5/16	60°			
-14	5-1/8	4-1/8	1	.406	1-1/4	5/16	60°			
-15	6-1/8	5-1/8	1	.406	1-1/4	5/16	60°			

To order or specify give: Stud Code, Dash Number, Material and Quantity Example: RA EJ-739, -12, Stainless Steel 310, 750 pcs.

See Accessories for accessory detail and Ferrule Specifications for ferrule options.



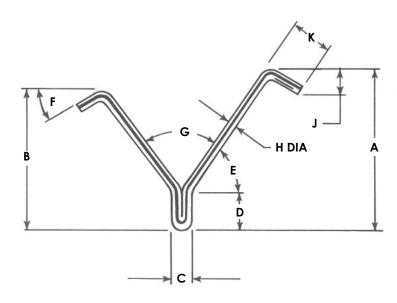


	Anchor									
Dash Number	A	В	с	D	E	F				
-01	5-1/8	1	.406	1-1/4	1/4	60°				
-02	7-1/8	3-1/8	.406	1-1/4	1/4	60°				
-03	4-1/4	3/4	.406	1-1/4	5/16	60°				
-04	5	1	.406	1-1/4	5/16	60°				
-05	6	2	.406	- /4	5/16	60°				
-06	6	1	.406	1-1/4	5/16	60°				
-07	7	3	.406	- /4	5/16	60°				
-08	8	3	.406	1-1/4	5/16	60°				
-09	8	4	.406	1-1/4	5/16	60°				
-10	9	4	.406	1-1/4	5/16	60°				
-11	10	5	.406	- /4	5/16	60°				
-12	10	6	.406	1-1/4	5/16	60°				
-13	П	6	.406	1-1/4	5/16	60°				
-14	12	7	.406	1-1/4	5/16	60°				

To order or specify give: Stud Code, Dash Number, Material and Quantity Example: RA EJ-740, -01, Stainless Steel 310, 750 pcs.

See Accessories for accessory detail and Ferrule Specifications for ferrule options.



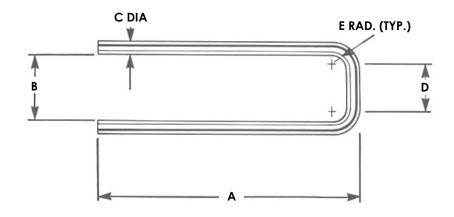


	Anchor									
Dash Number	А	В	с	D	E	F	G	н	J	к
-01	I-5/8	I-3/8	3/8	3/4	54°	30°	72°	3/16	9/16	15/16
-02	2-1/8	I-7/8	3/8	3/4	54°	30°	72°	3/16	9/16	15/16
-03	2-5/8	2-3/8	3/8	3/4	54°	30°	72°	3/16	9/16	15/16
-04	3-1/8	2-7/8	3/8	3/4	54°	30°	72°	3/16	9/16	15/16
-05	3-5/8	3-3/8	3/8	3/4	54°	30°	72°	3/16	9/16	15/16
-06	4-1/8	3-7/8	3/8	3/4	54°	30°	72°	3/16	9/16	15/16
-07	4-5/8	4-3/8	3/8	3/4	54°	30°	72°	3/16	9/16	15/16
-08	5-1/8	4-7/8	3/8	3/4	54°	30°	72°	3/16	9/16	15/16
-09	7-1/8	6-7/8	3/8	3/4	54°	30°	72°	3/16	9/16	15/16
-10	9-1/8	8-7/8	3/8	3/4	54°	30°	72°	3/16	9/16	15/16

To order or specify give: Stud Code, Dash Number, Material and Quantity Example: RA EJ-741, -09, Stainless Steel 310, 750 pcs.

See Accessories for accessory detail and Ferrule Specifications for ferrule options.





	Anchor										
Dash Number	A	в	с	D	E	Dash Number	А	в	с	D	E
-01	4	I	3/16	3/8	5/16	-09	9	I	1/4	3/8	5/16
-02	4-3/4	I	3/16	3/8	5/16	-10	4-3/4	I	1/4	3/8	5/16
-03	5-3/4	I	3/16	3/8	5/16	-11	5-3/4	1	1/4	3/8	5/16
-04	6	I	3/16	3/8	5/16	-12	6	I	1/4	3/8	5/16
-05	6-1/8	I	3/16	3/8	5/16	-13	6-1/8	I	1/4	3/8	5/16
-06	8-1/2	I	3/16	3/8	5/16	-14	7	I	1/4	3/8	5/16
-07	7	I	3/16	3/8	5/16	-15	8	I	1/4	3/8	5/16
-08	8	I	3/16	3/8	5/16	-16	8-1/2	I	1/4	3/8	5/16

To order or specify give: Stud Code, Dash Number, Material and Quantity Example: RA EJ-742, -07, Stainless Steel 310, 750 pcs.

See Accessories for accessory detail and Ferrule Specifications for ferrule options.



**RA EJ-743** 

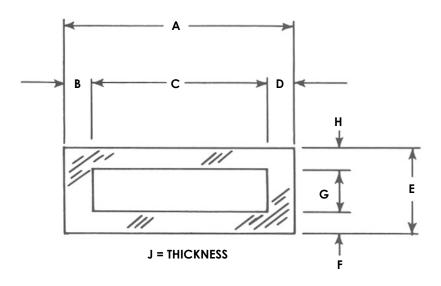


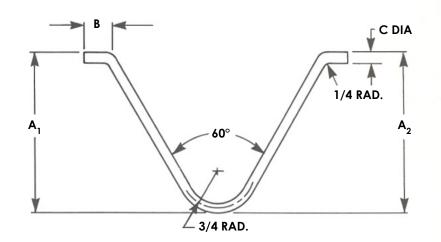
	Plate								
Dash Number	Dash Number A B C D E F G H J								L
-01	2-1/8	1/4	I-5/8	I/4	3/4	7/32	5/16	7/32	1/8

To order or specify give: Stud Code, Dash Number, Material and Quantity Example: RA EJ-743, -01, Stainless Steel 310, 750 pcs.

See Accessories for accessory detail and Ferrule Specifications for ferrule options.



**RA EJ-744** 

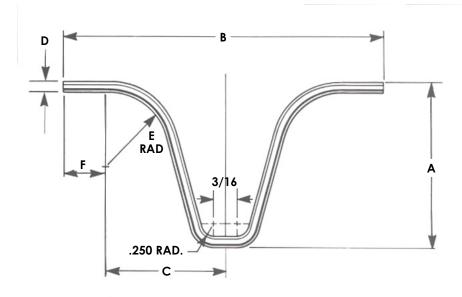


		Anchor		
Dash Number	A1	A2	В	C
-01	2	2	1/2	3/16
-02	2	4	1	3/16
-03	3	3	1	3/16
-04	3	5	I	3/16
-05	4	4	I	3/16
-06	4	6	I	3/16
-07	5	5	T	3/16
-08	5	7	I	3/16
-09	6	6	L	3/16

To order or specify give: Stud Code, Dash Number, Material and Quantity Example: RA EJ-744, -09, Stainless Steel 310, 750 pcs.

See Accessories for accessory detail and Ferrule Specifications for ferrule options.



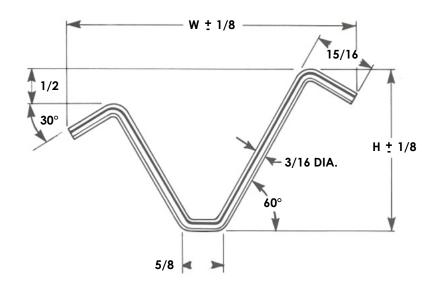


	Anchor									
Dash Number	А	В	с	D	E	F				
-01	3-1/2	6	2-1/4	3/16	1-1/4	3/4				
-02	4	6	2-1/4	3/16	1-1/4	3/4				
-03	4-1/2	6	2-1/4	3/16	1-1/4	3/4				
-04	5	6	2-1/4	3/16	1-1/4	3/4				
-05	5-1/2	6	2-1/4	3/16	1-1/4	3/4				
-06	6	6	2-1/4	3/16	1-1/4	3/4				

To order or specify give: Stud Code, Dash Number, Material and Quantity Example: RA EJ-745, -03, Stainless Steel 310, 750 pcs.

See Accessories for accessory detail and Ferrule Specifications for ferrule options.





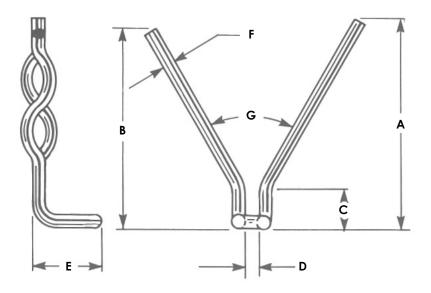
Anchor											
Dash Number	н	w	Dash Number	н	w						
-01	2	3-1/2	-09	6	9-1/2						
-02	2-1/2	4-1/4	-10	6-1/2	10-1/4						
-03	3	5	-11	7	П						
-04	3-1/2	5-3/4	-12	7-1/2	11-3/4						
-05	4	6-1/2	-13	8	12-1/2						
-06	4-1/2	7-1/4	-14	8-1/2	13-1/4						
-07	5	8	-15	9	14						
-08	5-1/2	8-3/4									

To order or specify give: Stud Code, Dash Number, Material and Quantity Example: RA EJ-746, -06, Stainless Steel 310, 750 pcs.

See Accessories for accessory detail and Ferrule Specifications for ferrule options.



**RA EJ-750** 

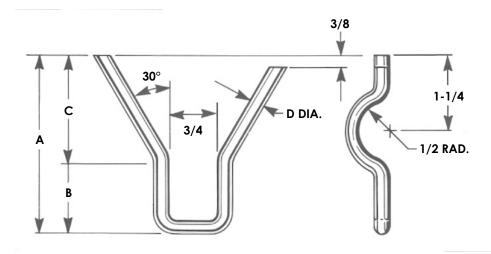


Anchor									
Dash Number	А	В	с	D	E	F	G		
-01	7	6-1/2	3-1/8	7/16	1-1/4	1/4	60°		

To order or specify give: Stud Code, Dash Number, Material and Quantity Example: RA EJ-750, -01, Stainless Steel 310, 750 pcs.

See Accessories for accessory detail and Ferrule Specifications for ferrule options.





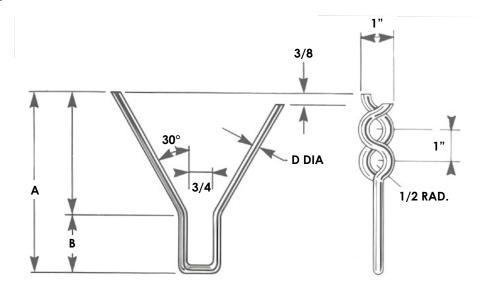
	Anchor											
Dash Number	A	В	с	D	Dash Number	A	В	с	D			
-01	2.2	0	2.2	1/4	-06	7	2	4	1/4			
-02	3	- I	2	1/4	-07	8	3	5	1/4			
-03	4	I	3	1/4	-08	9	4	5	1/4			
-04	5	2	3	1/4	-09	10	5	5	1/4			
-05	6	2	4	1/4	-10	П	6	5	1/4			

To order or specify give: Stud Code, Dash Number, Material and Quantity Example: RA EJ-751, -03, Stainless Steel 310, 750 pcs.

See Accessories for accessory detail and Ferrule Specifications for ferrule options.



**RA EJ-752** 



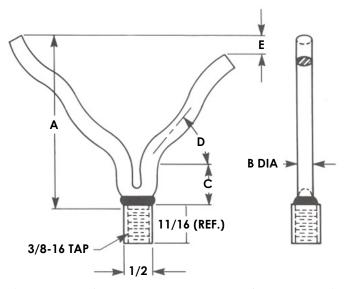
	Anchor											
Dash Number	A	В	с	D	Dash Number	А	В	с	D			
-01	2.2	0	2.2	1/4	-06	7	2	4	1/4			
-02	3	I	2	1/4	-07	8	3	5	1/4			
-03	4	I	3	1/4	-08	9	4	5	1/4			
-04	5	2	3	1/4	-09	10	5	5	1/4			
-05	6	2	4	1/4	-10	П	6	5	1/4			

To order or specify give: Stud Code, Dash Number, Material and Quantity Example: RA EJ-752, -05, Stainless Steel 310, 750 pcs.

See Accessories for accessory detail and Ferrule Specifications for ferrule options.



**RA EJ-801** 



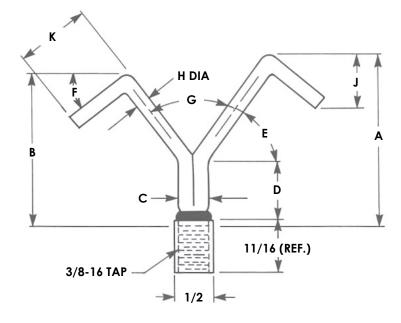
Anchor											
Dash Number	A	В	с	D	E						
-01	2	I/4	3/4	50°	1/2						
-02	2-5/8	I/4	3/4	50°	1/2						
-03	3-1/8	1/4	3/4	50°	1/2						
-04	3-5/8	1/4	3/4	50°	1/2						
-05	4-1/8	I/4	3/4	50°	1/2						
-06	5	I/4	3/4	50°	1/2						
-07	5-1/8	I/4	3/4	50°	1/2						
-08	7-1/8	1/4	3/4	50°	1/2						
-09	2-5/8	5/16	3/4	50°	1/2						
-10	3-1/8	5/16	3/4	50°	1/2						
-11	3-5/8	5/16	3/4	50°	1/2						
-12	4-1/8	5/16	3/4	50°	1/2						
-13	4-5/8	5/16	3/4	50°	1/2						
-14	5-1/8	5/16	3/4	50°	1/2						
-15	7-1/8	5/16	3/4	50°	1/2						

To order or specify give: Stud Code, Dash Number, Material and Quantity Example: RA EJ-801, -02, Stainless Steel 310, 750 pcs.

See Accessories for accessory detail and Ferrule Specifications for ferrule options.





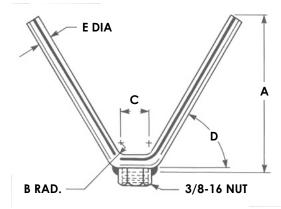


	Anchor										
Dash Number	A	В	с	D	E	F	G	н	L	к	
-01	I-5/8	I-3/8	3/8	3/4	54°	30°	72°	3/16	9/16	15/16	
-02	2-1/8	I-7/8	3/8	3/4	54°	30°	72°	3/16	9/16	15/16	
-03	2-5/8	2-3/8	3/8	3/4	54°	30°	72°	3/16	9/16	15/16	
-04	3-1/8	2-7/8	3/8	3/4	54°	30°	72°	3/16	9/16	15/16	
-05	3-5/8	3-3/8	3/8	3/4	54°	30°	72°	3/16	9/16	15/16	
-06	4-1/8	3-7/8	3/8	3/4	54°	30°	72°	3/16	9/16	15/16	
-07	4-5/8	4-3/8	3/8	3/4	54°	30°	72°	3/16	9/16	15/16	
-08	5-1/8	4-7/8	3/8	3/4	54°	30°	72°	3/16	9/16	15/16	
-09	7-1/8	6-7/8	3/8	3/4	54°	30°	72°	3/16	9/16	15/16	
-10	9-1/8	8-7/8	3/8	3/4	54°	30°	72°	3/16	9/16	15/16	

To order or specify give: Stud Code, Dash Number, Material and Quantity Example: RA EJ-802, -05, Stainless Steel 310, 750 pcs.

See Accessories for accessory detail and Ferrule Specifications for ferrule options.





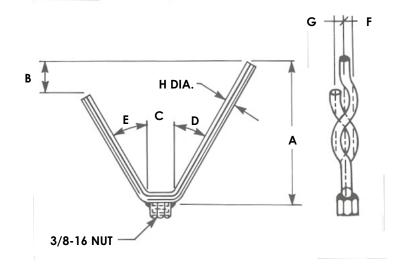
Anchor										
Dash Number	А	В	с	D	E					
-01	2	3/4	3/4	60°	1/8					
-02	3	3/4	3/4	60°	1/8					
-03	6-1/2	3/4	3/4	60°	1/8					
-04	1-1/2	3/4	3/4	60°	3/16					
-05	2	3/4	3/4	60°	3/16					
-06	2-1/4	3/4	3/4	60°	3/16					
-07	2-3/4	3/4	3/4	60°	3/16					
-08	3-3/4	3/4	3/4	60°	3/16					
-09	4-1/2	3/4	3/4	60°	3/16					
-10	5-1/2	3/4	3/4	60°	3/16					
-11	6-1/2	3/4	3/4	60°	3/16					
-12	1-1/2	3/4	3/4	60°	I/4					
-13	2-1/4	3/4	3/4	60°	I/4					
-14	2-3/4	3/4	3/4	60°	I/4					
-15	3-3/4	3/4	3/4	60°	I/4					
-16	4-1/2	3/4	3/4	60°	I/4					
-17	3-1/2	3/4	3/4	60°	I/4					
-18	6-1/2	3/4	3/4	60°	1/4					

To order or specify give: Stud Code, Dash Number, Material and Quantity Example: RA EJ-803, -13, Stainless Steel 310, 750 pcs.

See Accessories for accessory detail and Ferrule Specifications for ferrule options.



**RA EJ-804** 



				Anchor				
Dash Number	А	В	с	D	E	F	G	н
-01	- /4	1/2	3/4	30°	30°	3/16	3/16	3/16
-02	2-1/4	1/2	3/4	30°	30°	3/16	3/16	3/16
-03	2-3/4	1/2	3/4	30°	30°	3/16	3/16	3/16
-04	3-3/4	1/2	3/4	30°	30°	3/16	3/16	3/16
-05	4-3/4	1/2	3/4	30°	30°	3/16	3/16	3/16
-06	5-3/4	1/2	3/4	30°	30°	3/16	3/16	3/16
-07	6-3/4	1/2	3/4	30°	30°	3/16	3/16	3/16
-08	1-1/4	1/2	3/4	30°	30°	3/16	3/16	I/4
-09	2-1/4	1/2	3/4	30°	30°	3/16	3/16	I/4
-10	2-3/4	1/2	3/4	30°	30°	3/16	3/16	I/4
-11	3-3/4	1/2	3/4	30°	30°	3/16	3/16	1/4
-12	4-3/4	1/2	3/4	30°	30°	3/16	3/16	1/4
-13	5-3/4	1/2	3/4	30°	30°	3/16	3/16	1/4
-14	6-3/4	1/2	3/4	30°	30°	3/16	3/16	1/4

To order or specify give: Stud Code, Dash Number, Material and Quantity Example: RA EJ-804, -11, Stainless Steel 310, 750 pcs.

See Accessories for accessory detail and Ferrule Specifications for ferrule options.

