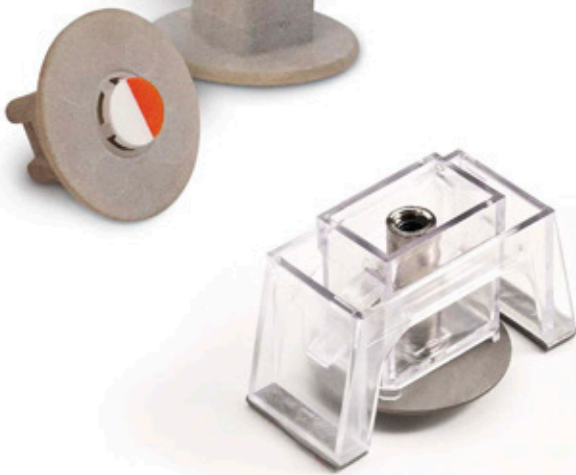


**CLICK  
BOND**<sup>®</sup>

**ADHESIVE - BONDED  
FASTENER TECHNOLOGY**

*Product Guide*



**PIONEERING > ADVANCED > SOLUTIONS**

*Thank you for your interest in Click Bond and the wide range of solutions we've developed to unlock the potential of your designs, to help you transform them into high-performance products, and to solve your manufacturing and repair challenges.*



*Enhancing our customers' competitiveness is Click Bond's primary mission. We look forward to supporting you with our broad capabilities, from design and applications engineering, to high quality manufacturing, to global training and customer support.*

**Karl Hutter**  
*President and  
Chief Executive Officer*

**Proudly serving the aerospace industry since 1987**, Click Bond supports global leaders in the design and manufacture of high performance platforms and systems. Over nearly thirty years, we've expanded our reach, bringing our capabilities and the benefits of adhesive bonded fastening to bear on the technical challenges of the marine, energy, and other industrial sectors.

We pioneer advanced solutions in the field of assembly hardware, utilizing our knowledge of the industries we serve and our customers' challenges, the latest developments in material and process science, and our diverse and advanced manufacturing capabilities.

The result is a line of elegant and innovative fastening solutions specifically developed to enable your designs and to make your products lighter, stronger, faster, safer, higher-value, and longer-lived. In other words, Click Bond products and the support behind them simply make you more competitive in today's challenging marketplace.



*Click Bond, Inc. is headquartered in Carson City, Nevada, with additional manufacturing facilities in Watertown, Connecticut and Saltney, Wales, United Kingdom. A dedicated network of field-support professionals and authorized distributors support our customers, worldwide.*



# Strong Bonds. Easy Installations.

**Click Bond adhesive-bonded fastener products are provided with proprietary installation fixtures** that ensure consistent, high-strength bonded attachment to structure.

By providing continuous positive pressure to the bondline during adhesive cure, our fixturing technology ensures that optimum results are achieved with every installation. Additionally, these fixtures facilitate accurate fastener positioning.

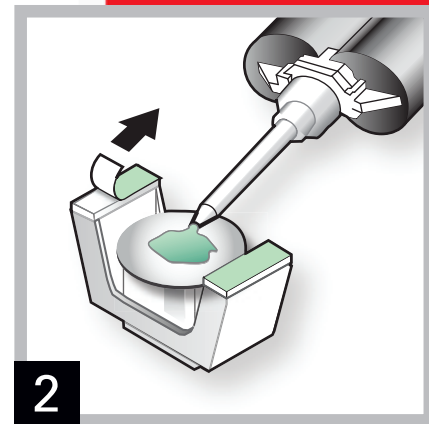
In concert with a Click Bond structural adhesive properly selected for the intended application, our fixturing technology and proven surface preparation processes allow secure attachment to a wide variety of metals, thermoplastics, and composites.

Our simple, three-step installation sequence delivers consistent, high-performance results while streamlining manufacturing flows and reducing the cost of product manufacture, retrofit, and repair.



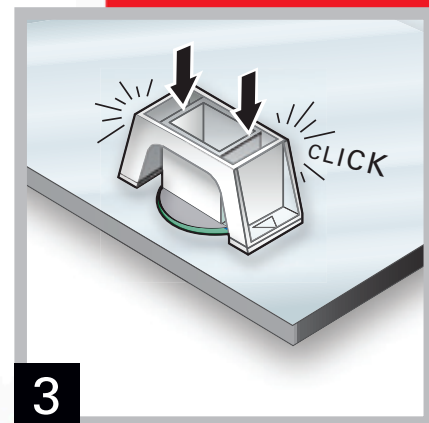
1

*Prepare Surface*



2

*Apply Adhesive*



3

*Bond Fastener*

*NOTE: Installation details vary depending on substrate and part type.*

## ADVANTAGES

### 8 PRESERVES STRUCTURAL INTEGRITY

Elimination of structural holes, removes stress concentrations, and prevents fatigue crack initiation.

### 1 IMPROVES CYCLE TIME

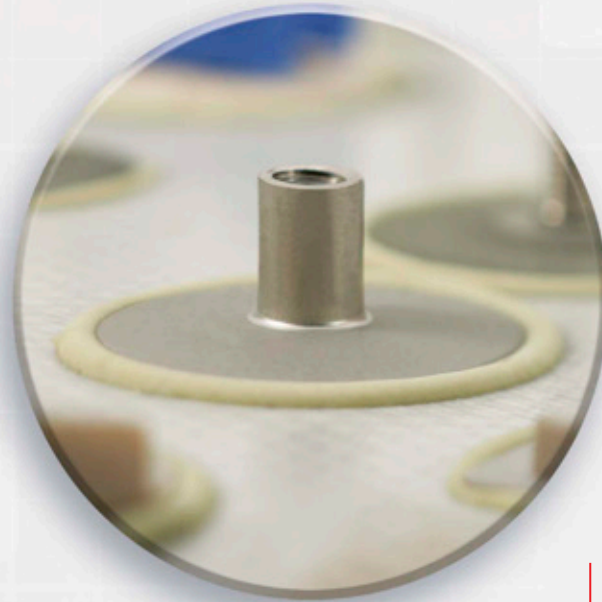
Adhesive-bonded fastening solutions maximize design and work sequence flexibility while reducing assembly time.

### 2 REDUCES FOREIGN OBJECT DAMAGE (FOD)

By eliminating the need for rivets, washers, and bolts, FOD risk is reduced.

### 7 AVOIDS ERRORS & REWORK

A major share of shop floor rework cost relates to misdrilled holes, eliminated by adhesive-bonded fastening.



### 3 REDUCES PRODUCTION COSTS

Elimination of drilling and associated steps streamlines and derisks production processes and lowers total cost.

### 6 REDUCES WEIGHT

Adhesive-bonded fastening delivers hole elimination and localized reinforcement, permitting reduced material, weight optimized structure.

### 5 PREVENTS CORROSION

Our fastening solutions integrate an adhesive barrier between the substrate and the fastener, preventing galvanic corrosion.

### 4 SIMPLIFIES INSTALLATION & MAINTENANCE

Our easy, three-step installation process can be performed in the factory, at sea, or even on the battlefield, facilitating production, retrofits, and repairs.



## Adhesive-Bonded Fastening Solutions

### *Benefits Across Industries*

#### **Aerospace**

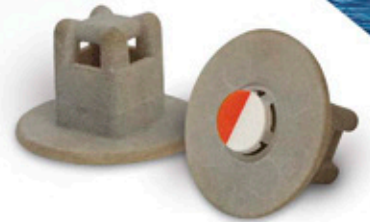
- Reduces installation cost
- Improves production span time
- Simplifies installation
- Enhances structural properties in metals and composites
- Eliminates crack starting holes in metals and composites
- Avoids drilling related rework and repair
- Reduces foreign object damage (FOD) risk
- Prevents corrosion
- Permits attachment to stress and fatigue critical structure
- Eliminates leak paths
- Reduces weight
- Meets industry hardware standards
- Simplifies system retrofits and upgrades
- Facilitates field repair and support

#### **Unmanned Systems**

- Reduces assembly cost
- Reinforces lightweight materials
- Enables weight reduction
- Facilitates payload integration and modification

#### **Equipment & Facilities**

- Eliminates welding
- Simplifies installation
- Eliminates drilled holes
- Facilitates modification & repair
- Prevents galvanic corrosion





### Marine & Offshore (Oil & Gas)

- Eliminates need for hot work, fire watch, and gas freeing
- Maximizes design and work sequence flexibility
- Facilitates and simplifies repairs at sea
- Protects against galvanic corrosion

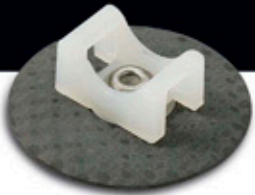
### Ground Vehicles

- Eliminates welding
- Minimizes corrosion and leak paths
- Facilitates field upgrades and repairs
- Reduces risk of damage to sensitive electronics



## A Collaborative Engineering Approach

- **Concept to Sustainment**
- **Multi-Industry Expertise**
- **In-House Prototyping**
- **Agile and Responsive**



**At Click Bond we approach customer relationships as vital partnerships.** Our engineers and scientists strive to be a virtual extension of our customers' design teams. This capability is an essential aspect of who we are.

Throughout our history, we have focused on tackling the tough problems and redefining what's possible in the assembly of platforms and systems in the aerospace, marine, energy, and industrial sectors.

Our in-house prototyping capabilities enable us to experiment with new ideas and collaboratively refine designs. Our manufacturing experts drive refinements in our production processes to maximize quality, increase customer value, and shorten lead times.

Click Bond field support professionals ensure that our customers receive on-site technical training focused on reinforcing reliable installation techniques. The entire Click Bond team is dedicated to partnering with our customers every step of the way, from concept to sustainment, to enhance our relationships and our customers' competitiveness.

While a focus on day-to-day operations supporting customer requirements is paramount, research and development remains a key priority as we pioneer the next generation of fastening solutions.



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# NUTPLATES

Reduce hole count, reduce cost, increase performance and structural life.



## NUTPLATES

Click Bond's adhesive-bonded rivetless nutplates eliminate the drilling of attachment rivet holes traditionally associated with nutplate installation, preserving structural integrity and longevity, enabling weight savings, and reducing installation, rework, and repair time and cost.

All Click Bond nutplates conform to the performance requirements of NASM25027 and other high-performance OEM specifications including those requiring 50 cycle reusability with stainless steel or titanium bolts. Click Bond adhesive-bonded nutplates are FAA TSO approved, allowing direct substitution for traditional riveted nutplates.

Unlike other rivetless nutplate systems that incorporate mechanical retention features, Click Bond's adhesive-bonded nutplates are not grip specific and their installation does not generate structural stress concentrations nor require removal of parent material. Rather, a fast curing structural adhesive secures the nutplate to structure. Should a repair or modification necessitate nutplate removal, approved non-destructive methods are available.

Disposable installation fixtures are included with every nutplate. This proprietary technology centers the nutplate on the fastener hole, protects the nut threads from adhesive fouling, and clamps the nutplate under positive pressure while the adhesive cures, ensuring optimum bond strength and consistency.



### APPLICATIONS

- Access Panels
- Structural Skins
- Structural Mate & Assembly
- Galleys & Lavatories
- Hinge & Fitting Attachments
- Stress & Fatigue Critical Areas
- Floorboards
- Interiors & Cockpits
- Wind Screens
- Canopy Frames
- Control Surfaces
- Pressure Bulkheads
- Fairings & Pods
- Instrument Panels
- Equipment Racks
- Fuel & Fluid Tanks
- Pressurized Vessels
- Payload Covers
- Antennas & Systems
- Payload Hardpoints
- Engine Bays
- Door Frames
- UAV Structures

Click Bond's adhesive-bonded rivetless nutplates simplify the closeout process for structural areas with no backside access, including attachment of removable skins and access panels, completion of structural mate joints, installation of equipment, and securing of radomes, fairings, and antennas.

## Features

- Proprietary disposable fixture delivers optimal bond strength and repeatable, reliable installations
- Fixtures are color-coded for size identification
- Significantly reduces installation and rework
- Compatible with metal and composite structures
- Imperial and metric thread sizes in diameters from 04-40 to 1/2-20 and from M3 to M10
- Replaceable nut element, high reuse, extended float, and sealed variants available
- Multiple nut element counterbores / thread reliefs available

## Standard

Secure panels, skins, and access covers in applications where fluid or pressure sealing is not required. Variants with clip and bracket retained nut elements permit post-installation nut replacement. Double and triple nut configurations are also available.



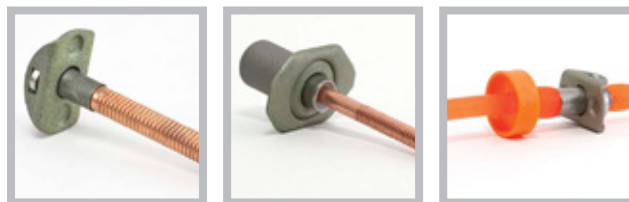
## Sealed

Ideal for closeout of fluid-filled bays and tanks or pressure vessels, sealed nutplates are suitable for submerged application in aerospace fuels and industrial fluids when installed with compatible adhesives.



## Sleeved

Sleeved nutplates combine adhesive bonding and ACRES® sleeves, delivering enhanced protection of the hole bore. FLEXBOND® (Fatigue Life Extension) nutplates incorporate a mandrel-expanded sleeve to create the ultimate solution for structural fatigue life enhancement and nutplate installation, in one easy process.

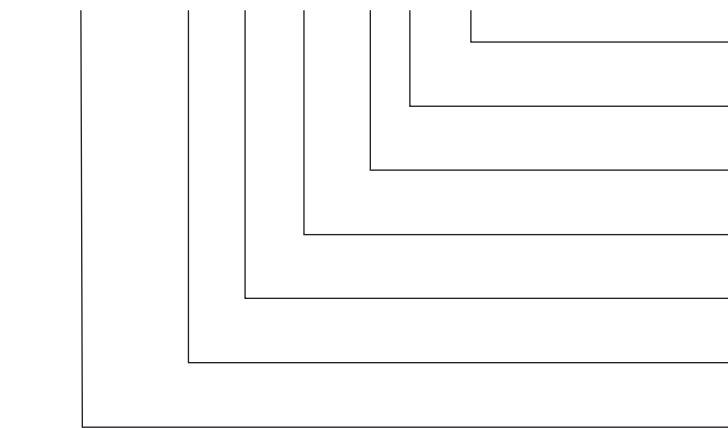


## How Our Part Numbers Work

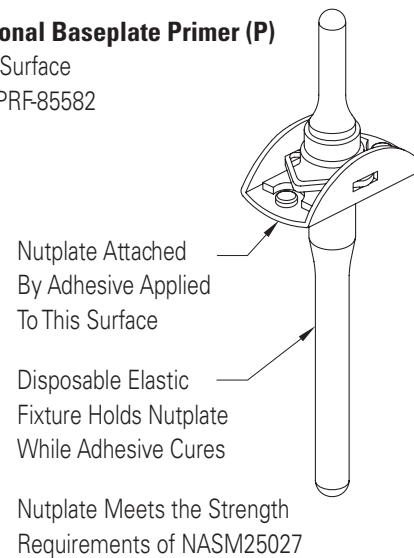
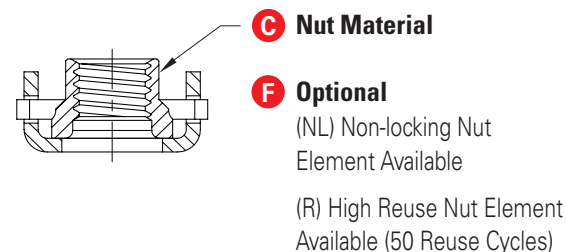
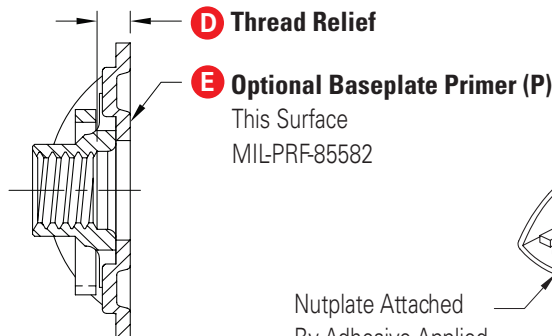
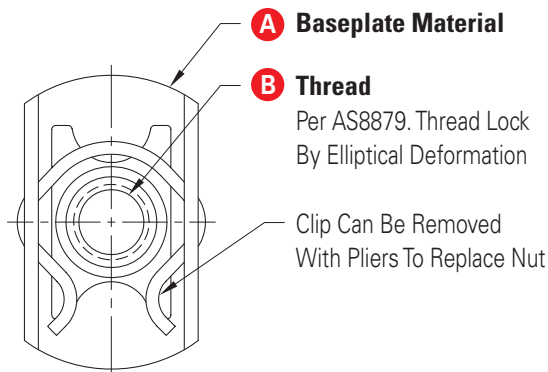
This product guide lists the basic part numbers (for example, CB6009). The full part number is specified by adding further details, such as material and thread codes, to the basic part number. A sample part number is illustrated here as an example. A representative of Click Bond Sales will help you determine the right part number for your application.

## Diagramming a Part Number

**CB6009 CR 3 CRS 1 P NL**



- F** Suffix (optional)
  - E** Baseplate Primer (optional)
  - D** Thread Relief
  - C** Nut Material
  - B** Thread Size
  - A** Baseplate Material
- Basic Part Number**



## How Our Part Tables Work

CB6009	CR	3		CRS	1		
Basic Part Number	Baseplate Material	Thread Size		Nut Material	Thread Relief		Baseplate Style
		Imperial	Metric		Imperial	Metric	
CB6009	A, AA, CR (P)	08, 3, 4, 5, 6, 7, 8	4M, 5M, 6M, 8M, 10M	-, CRS, CRT	1, 2, 3, 4, 5, 6	1, 4, 6, 8, 10, 12	2 Lug C

### Material Options

#### Baseplate Material

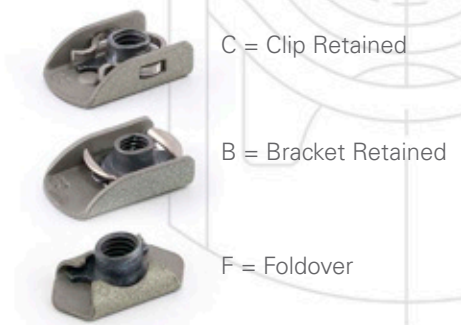
A = Aluminum  
 AA = Anodized Aluminum  
 CR, CRA = A-286/304 CRES Passivated  
 C = Carbon/Epoxy, 350°F Cure  
 G = Glass/Epoxy, 250°F Cure  
 E = Glass/Epoxy, 350°F Cure  
 (P) = Optional Primer Available

#### Nut Material

-, CR, CRA = A-286 CRES Passivated  
 CRS = CRES Silver Plate  
 CRT = CRES Copper Plate

High reuse nut elements available

### Baseplate Styles



NOTE: C and B styles permit nut element replacement

### Thread Sizes

Thread Sizes			
Imperial		Metric	
Code	Size	Code	Size
04	.1120-40	3M	MJ3 x 0,5
06	.1380-32	4M	MJ4 x 0,7
08	.1640-32	5M	MJ5 x 0,8
3	.1900-32	6M	MJ6 x 1,0
4	.2500-28	8M	MJ8 x 1,0
420	.2500-20	10M	MJ10 x 1,25
5	.3125-24		
6	.3750-24		
7	.4375-20		
8	.5000-20		

### Thread Relief

Multiple thread relief options are available on many nutplates and vary by part number and thread size. A representative of Click Bond Sales will help you determine the best solution for your application.

# Nutplates

## Standard Nutplates Product images not to scale.



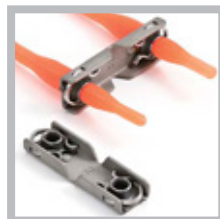
No Lug



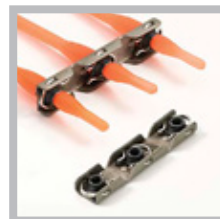
1 Lug



2 Lug



2 Nut Channel



3 Nut Channel

Basic Part Number	Baseplate Material	Thread Size		Nut Material	Thread Relief		Baseplate Style
		Imperial	Metric		Imperial	Metric	
CB2009	A, AA, CR, CRA, (P)	08, 3	4M, 5M	CR, CRA	None, 2, 3, 4, 5, 6	None, 2, 3, 4, 5, 6	2 Lug B
CB2011	A, AA, CR, CRA, (P)	08, 3	4M, 5M	CR, CRA	None, 2, 3, 4, 5, 6	None, 2, 3, 4, 5, 6	1 Lug B
CB3009	A, AA, CR, CRA, (P)	4, 420	6M	CR, CRA	None, 2, 3, 4, 5, 6	None, 2, 3, 4, 5, 6	2 Lug B
CB3011	A, AA, CR, CRA, (P)	4, 420	6M	CR, CRA	None, 2, 3, 4, 5, 6	None, 2, 3, 4, 5, 6	1 Lug B
CB4009	C, E, G	08, 3, 4	4M, 5M, 6M	CR, CRA	None, 2, 3, 4, 5, 6	None, 2, 3, 4, 5, 6	2 Lug B
CB4011	C, E, G	08, 3, 4	4M, 5M, 6M	CR, CRA	None, 2, 3, 4, 5, 6	None, 2, 3, 4, 5, 6	1 Lug B
CB6003	CR, (P)	08, 3, 4, 5, 6, 7, 8	4M, 5M, 6M, 8M, 10M	-, CRS	1, 2, 3, 4, 5, 6	1, 4, 6, 8, 10, 12	No Lug C
CB6009	A, AA, CR, (P)	08, 3, 4, 5, 6, 7, 8	4M, 5M, 6M, 8M, 10M	-, CRS, CRT	1, 2, 3, 4, 5, 6	1, 4, 6, 8, 10, 12	2 Lug C
CB6011	A, AA, CR, (P)	08, 3, 4, 5, 6, 7, 8	4M, 5M, 6M, 8M, 10M	-, CRS	1, 2, 3, 4, 5, 6	1, 4, 6, 8, 10, 12	1 Lug C
CB6012	CR, (P)	08, 3, 4, 5	4M, 5M, 6M, 8M	-, CRS	1, 2, 3, 4, 5, 6	1, 4, 6, 8, 10	2 Nut Channel C
CB6013	CR, (P)	08, 3, 4, 5	4M, 5M, 6M, 8M	-, CRS	1, 2, 3, 4, 5, 6	1, 4, 6, 8, 10	3 Nut Channel C
CB6014	CR, (PS)	04, 06, 08, 3, 4, 5	3M, 4M, 5M, 6M, 8M	-	1	1	2 Lug F
CB8009	A, AA, CR, (P)	08, 3, 4, 5, 6	4M, 5M, 6M, 8M, 10M	-, CRT	1, 2, 3, 4, 5, 6	None, 4, 6, 8, 10, 12	2 Lug C
CB8011	A, AA, CR, (P)	08, 3, 4, 5, 6	4M, 5M, 6M, 8M, 10M	-, CRT	1, 2, 3, 4, 5, 6	None, 4, 6, 8, 10, 12	1 Lug C
CB9197	CR, (P)	3, 4	NA	-	1, 2, 3, 4, 5, 6	NA	2 Lug F

### Baseplate Material

A = Aluminum  
 AA = Anodized Aluminum  
 CR, CRA = A-286/304 CRES Passivated  
 C = Carbon/Epoxy, 350°F Cure  
 G = Glass/Epoxy, 250°F Cure  
 E = Glass/Epoxy, 350°F Cure  
 (P) = Optional Primer Available  
 (PS) = Primer Standard

### Nut Material

-, CR, CRA = A-286 CRES Passivated  
 CRS = CRES Silver Plate  
 CRT = CRES Copper Plate

High reuse nut elements available



### Baseplate Style



NOTE: C and B styles permit nut element replacement

## Sealed Nutplates *Product images not to scale.*



Basic Part Number	Dome and Washer Material	Thread Size		Nut Material	Thread Relief		Baseplate Style
		Imperial	Metric		Imperial	Metric	
CB6008	CR, ACR, (P)	08, 3, 4, 5, 6, 7, 8	4M, 5M, 6M, 8M	-	2, 3, 4, 5, 6, 7, 8	3, 4, 6, 8, 10	1 Lug
CB6010	CR, ACR, (P)	08, 3, 4, 5, 6, 7, 8	4M, 5M, 6M, 8M	-	2, 3, 4, 5, 6, 7, 8	3, 4, 6, 8, 10	2 Lug
CB8008	CR, ACR, (P)	08, 3, 4, 5, 6, 7, 8	NA	-	2, 3, 4, 5, 6, 7, 8	NA	1 Lug
CB8010	CR, ACR, (P)	08, 3, 4, 5, 6, 7, 8	NA	-	2, 3, 4, 5, 6, 7, 8	NA	2 Lug
CB9356	CR, ACR, (P)	3	NA	CR	None, 3, 4, 5, 6, 7	NA	2 Lug (EF)

### Dome and Washer Material

CR = A-286 CRES Passivated  
 ACR = Anodized Aluminum Washer A-286 CRES Dome  
 (P) = Optional Primer Available

### Nut Material

-, CR = A-286 CRES Passivated

(EF) = Extended Float

## Sleeved Nutplates *Product images not to scale.*



**Installation tools available, refer to page 48 in the Tool Section.**

Basic Part Number	Baseplate or Dome and Washer Material	Thread Size Imperial	Nut Material	Thread Relief Imperial	Baseplate Style	Sleeve Type
CB6109	A, AA, CR, (P)	08, 3, 4, 5, 6	-, CRS	1, 2, 3, 4, 5, 6	2 Lug C	Flared
CB6209*	A, AA, CR, (P)	08, 3, 4, 5, 6	-, CRS	1, 2, 3, 4, 5, 6	2 Lug C	Straight
CB6307	A, AA, CR, (P)	3, 4	-, CRS	1, 2, 3, 4, 5, 6	Corner C	FLEX
CB6309	A, AA, CR, (P)	3, 4	-, CRS	1, 2, 3, 4, 5, 6	2 Lug C	FLEX
CB6310	CR, ACR, (P)	3, 4	-	2, 3, 4, 5, 6, 7, 8	2 Lug Sealed	FLEX
CB6311	A, AA, CR, (P)	3, 4	-, CRS	1, 2, 3, 4, 5, 6	1 Lug C	FLEX
CB6347	A, AA, CR, (P)	3, 4	-, CRS	1, 2, 3, 4, 5, 6	Corner C	FLEX
CB6349	A, AA, CR, (P)	3, 4	-	1, 2, 3, 4, 5, 6	2 Lug C	FLEX
CB6490	CR, ACR, (P)	3, 4, 5	(same as baseplate)	2, 3	2 Lug Sealed	FLEX
CB9382	CR, (P)	08, 3	(same as baseplate)	.062	2 Lug F	FLEX
CB9392	CR, (P)	08	(same as baseplate)	.062	2 Lug F	FLEX
CB9530	CR, (P)	3	-	None, 3, 4, 5, 6, 7	2 Lug Sealed (EF)	Flared

### Baseplate Material

A = Aluminum  
 AA, ACR = Anodized Aluminum  
 CR = CRES Passivated  
 (P) = Optional Primer Available

### Nut Material

- = A-286 CRES Passivated  
 CRS = CRES Silver Plate

### Sleeve Material

A-286 CRES Passivated  
 Optional aluminum coating available

### Sleeve Length

Sleeve lengths available from .031" to 1.000"

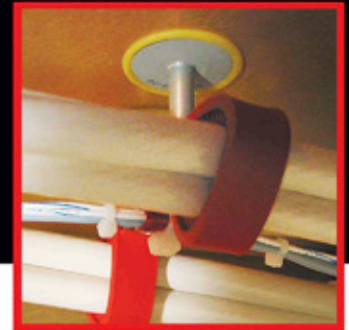
(EF) = Extended Float

\* Metric sizes available for CB6209

# STUDS & STANDOFFS



Unlock options, simplify installation and retrofit, and preserve structural integrity.



## STUDS & STANDOFFS

Click Bond's adhesive-bonded studs permit clamped attachment of wire bundles and tubing to structure where a through-bolt and nut combination is undesirable or impossible. They are also well suited for securing junction boxes, enclosures, or other modular equipment.

Larger diameter studs are ideal for heavier industrial and marine applications such as the attachment of deck boards, equipment, and furnishings to structural bulkheads and decks. Floating stud configurations address the rigorous requirements of high-shock environments.

Adhesive-bonded standoffs are suited for applications where separation between systems or components and structure is required. An extensive range of standoffs is available in multiple lengths and thread sizes with options for locking and non-locking threads.

Our new internally-fixtured studs and standoffs allow for installation in constrained footprint applications while reducing disposable waste and eliminating the step of fixture removal following adhesive cure.

Click Bond studs and standoffs are available in a variety of metal and composite materials and include installation fixtures that promote accurate positioning and hold the fastener under positive pressure while the adhesive cures, optimizing bond strength. Both internal and external fixtures are conducive to automated or robotic installation for high-volume applications.

### APPLICATIONS

#### Attachment of:

- Wiring
- Cables
- Tubing
- Lighting
- Insulation Blankets
- Audio / Video Systems
- Surveillance Equipment
- Acoustic Panels
- Signage
- Interior Panels
- Sensors
- Conduit
- Junction Boxes
- Modular Equipment
- Furniture
- Decking
- Grating
- Tooling
- Electrical Grounding
- Ballistic Panels
- Ducting
- Architectural Cladding



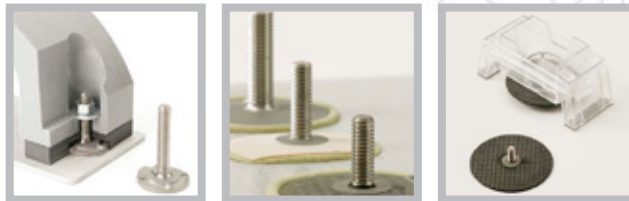
Click Bond's bonded studs and standoffs provide the designer with new options for attachment of systems and modular components to structure, without drilling. By eliminating unnecessary holes in structure, bonded fasteners preserve structural integrity, enhance design flexibility, and extend product longevity in new construction or retrofit applications.

## Features

- Allows attachment to highly stressed, fatigue critical, pressurized, or fluid boundary structures
- Eliminates cost of drilling and related errors in systems installation
- Prevents galvanic corrosion and eliminates crack initiating holes
- Installation fixtures ensure optimal bondline and installation consistency
- Baseplate options include metallic, thermoset composite, and thermoplastic materials
- Imperial and metric thread sizes from 04-40 to 1/20 and from M3 to M16

## Studs

Studs permit clamped attachment of wire bundles and tubing to structure, or securing of enclosures, racks, or other modular equipment.



## Standoffs

Standoffs permit clamped attachment of wire bundles and tubing while providing separation from structure.



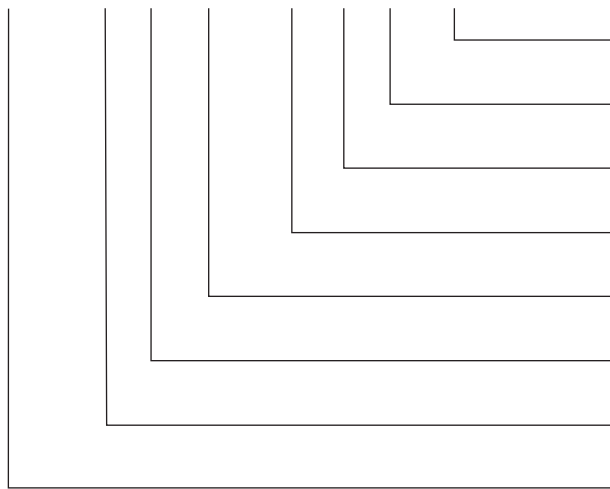
# Studs & Standoffs

## How Our Part Numbers Work

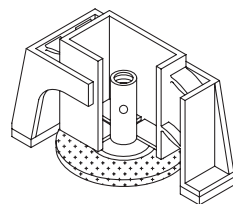
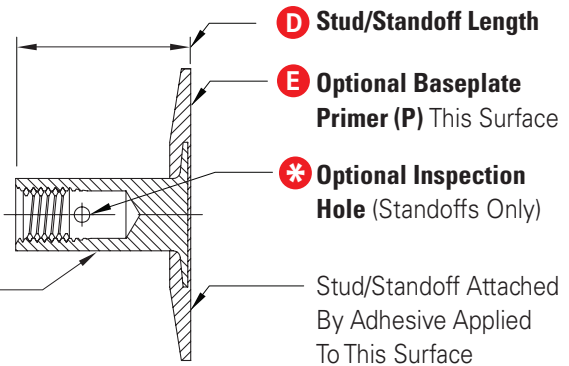
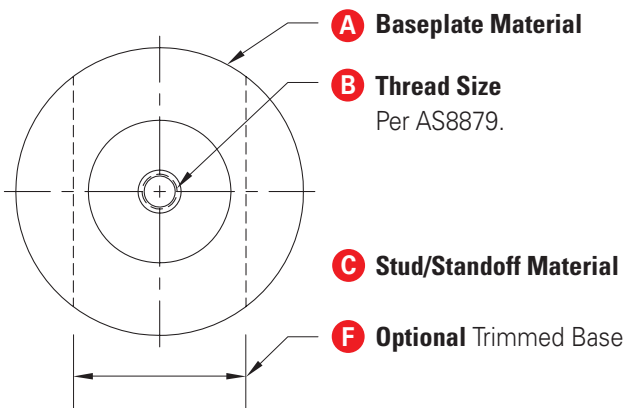
This product guide lists the basic part numbers (for example, CB4001). The full part number is specified by adding further details, such as material and thread codes, to the basic part number. A sample part number is illustrated here as an example. A representative of Click Bond Sales will help you determine the right part number for your application.

## Diagramming a Part Number

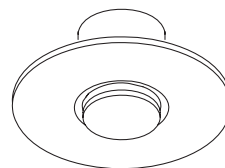
**CB4001 G 3 CRA 12 H P 750**



- F** Suffix (optional) Trimmed Base
  - E** Baseplate Primer (optional)
  - \*** Inspection Hole (optional for Standoffs)
  - D** Stud/Standoff Length
  - C** Stud/Standoff Material
  - B** Thread Size
  - A** Baseplate Material
- Basic Part Number**



**S** = Standard Fixture



**I** = Internal Fixture

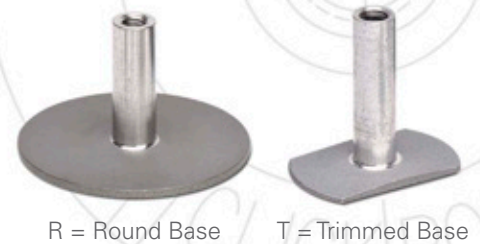
## How Our Part Tables Work

Basic Part Number	Baseplate Material	Thread Size		Stud/Standoff Material	Stud/Standoff Length		Baseplate Style & Size		Fixture Type
		Imperial	Metric		Imperial	Metric	Imperial	Metric	
		CB4001	C, G, E, K, P, U, UC, V, VC (P)		06, 08, 3	3M, 4M, 5M	A, AA, CR, CRA, T	5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 20, 22, 24	

### Material Options

- A = Aluminum
- AA = Anodized Aluminum
- CR, CRA, CRM = A-286/302/303/304/316 CRES Passivated
- C = Carbon/Epoxy, 350°F Cure
- G = Glass/Epoxy, 250°F Cure
- E = Glass/Epoxy, 350°F Cure
- T = Titanium
- K = Glass-Filled PEKK
- P = Glass-Filled PEEK
- U = 30% Glass-Filled PEI
- V = 40% Glass-Filled PEI
- UC = 30% Carbon-Filled PEI
- VC = 40% Carbon-Filled PEI
- (P) = Optional Primer Available

### Baseplate Styles



### Thread Sizes & Length Options

Fine Thread Sizes			
Imperial		Metric	
Code	Size	Code	Size
04	.1120-40	3M	MJ3 x 0,5
06	.1380-32	4M	MJ4 x 0,7
08	.1640-32	5M	MJ5 x 0,8
3	.1900-32	6M	MJ6 x 1,0
4	.2500-28	8M	MJ8 x 1,25
5	.3125-24	12M	MJ12 x 1,75
6	.3750-24		
7	.4375-20		
8	.5000-20		

Coarse Thread Sizes			
Imperial		Metric	
Code	Size	Code	Size
324	.190-24	14M	M14 x 1,5
420	.250-20	16M	M16 x 2,0
518	.312-18		
616	.375-16		
714	.437-14		
813	.500-13		
1011	.625-11		
1210	.750-10		

Lengths			
Imperial		Metric	
Code	Size	Code	Size
4	.250	6M	6
5	.312	8M	8
6	.375	10M	10
7	.437	12M	12
8	.500	15M	15
9	.562	20M	20
10	.625	25M	25
11	.687	30M	30
12	.750	35M	35
13	.812	40M	40
14	.875	50M	50
15	.937	75M	75
16	1.000	100M	100
17	1.062		
18	1.125		
20	1.250		
22	1.375		
24	1.500		
26	1.625		
28	1.750		
30	1.875		
32	2.000		

# Studs & Standoffs

**Studs** Product images not to scale.



CB3000



CB3200



CB4000



CB4200



CB5000



CB9522

Basic Part Number	Baseplate Material	Thread Size		Stud Material	Stud Length		Baseplate Style & Size		Fixture Type
		Imperial	Metric		Imperial	Metric	Imperial	Metric	
CB3000	same as stud (P)	06, 08, 3, 4, 5	3M, 4M, 5M, 6M, 8M	A, AA, CR, CRA, T	4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32	6M, 8M, 10M, 12M, 15M, 20M, 25M, 30M, 35M	R = 1.25" Dia. T = .75" Width	R = 31,8mm Dia. T = 19,1mm Width	S
CB3200	same as stud (P)	3, 4, 5, 6, 7, 8, 324, 420, 518, 616, 714, 813	5M, 6M, 8M, 10M, 12M	A, AA, CR, CRA, CRM	8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32	12M, 15M, 20M, 25M, 30M, 35M, 40M, 45M, 50M	R = 2.00" Dia. T = 1.25" Width	R = 50,8mm Dia. T = 31,8mm Width	S
CB4000	C, G, E, K, P, U, UC, V, VC (P)	06, 08, 3, 4, 5	3M, 4M, 5M, 6M, 8M	A, AA, CR, CRA, T	4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32	6M, 8M, 10M, 12M, 15M, 20M, 25M, 30M, 35M	R = 1.25" Dia. T = .75" Width	R = 31,8mm Dia. T = 19,1mm Width	S
CB4200	C, G, E	3, 4, 5	NA	A, AA, CR, CRA, T	8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32	NA	R = 2.00" Dia. T = 1.25" Width	None	S
CB5000	same as stud (P)	04, 06, 08, 3, 4	3M, 4M, 5M, 6M	A, AA, CR, CRA, T	4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24	6M, 8M, 10M, 12M, 15M, 20M, 25M, 30M, 35M	R = 0.62" Dia.	R = 15,9mm Dia.	S
CB9522	same as stud (P)	813, 1011, 1210	14M, 16M	CR	6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16	40M, 50M, 75M, 100M	R = 2.63" Dia.	R = 66,7mm Dia.	I

## Material

A = Aluminum  
 AA = Anodized Aluminum  
 CR, CRA, CRM = A-286/302/303/304/316 CRES Passivated  
 C = Carbon/Epoxy, 350°F Cure  
 G = Glass/Epoxy, 250°F Cure  
 E = Glass/Epoxy, 350°F Cure

T = Titanium  
 K = Glass-Filled PEKK  
 P = Glass-Filled PEEK  
 U = 30% Glass-Filled PEI  
 V = 40% Glass-Filled PEI  
 UC = 30% Carbon-Filled PEI  
 VC = 40% Carbon-Filled PEI  
 (P) = Optional Primer Available

## Baseplate Style

R = Round Base  
 T = Trimmed Base

## Fixture Type

S = Standard  
 I = Internal

## Standoffs *Product images not to scale.*



CB3001



CB3201 & CB4001



CB4002



CB4201



CB4512 & CB4516



CB5001

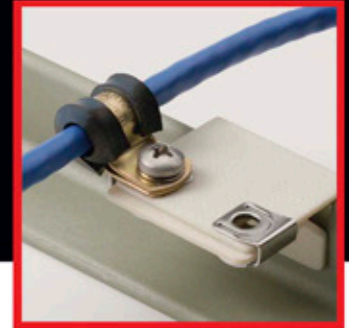
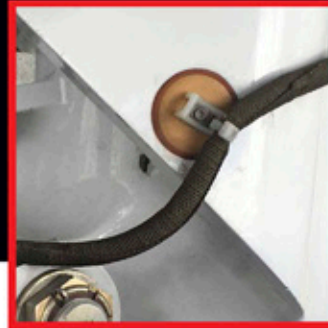
Basic Part Number	Baseplate Material	Thread Size		Standoff Material	Standoff Length		Baseplate Style & Size		Fixture Type
		Imperial	Metric		Imperial	Metric	Imperial	Metric	
CB3001	same as standoff (P)	06, 08, 3	3M, 4M, 5M	A, AA, CR, CRA, T	6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 20, 22, 24	10M, 12M, 15M 20M, 25M, 30M, 35M	R = 1.25" Dia. T = .75" Width	R = 31,8mm Dia. T = 19,1mm Width	S
CB3201	same as standoff (P)	3, 4, 5, 6, 8, 324, 420, 518, 616, 813	NA	A, AA, CR, CRA, CRM	8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 20, 22, 24, 28, 32	NA	R = 2.00" Dia. T = 1.25" Width	NA	S
CB4001	C, G, E, K, P, U, UC, V, VC (P)	06, 08, 3	3M, 4M, 5M	A, AA, CR, CRA, T	5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 20, 22, 24	10M, 12M, 15M 20M, 25M, 30M, 35M	R = 1.25" Dia. T = .75" Width	R = 31,8mm Dia. T = 19,1mm Width	S
CB4002	K, P, U, V (P)	08, 3	5M	Thread Insert Material CR	6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 18, 20, 22, 24, 26	NA	R = 1.25" Dia. T = .75" Width	NA	S
CB4201	C, G, E	3, 4, 5, 6	NA	A, AA, CR, CRA, T	8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 20, 22, 24, 28, 32	NA	R = 2.00" Dia. T = 1.25" Width	NA	S
CB4512	K, P, U, V (P)	3	NA	Thread Insert Material CR	8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 20, 22, 24	NA	R = 1.25" Dia. T = .75" Width	NA	I
CB4516	same as standoff (P)	08, 3, 4	NA	V	7, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32	NA	R = 1.25" Dia. T = .75" Width	NA	I
CB5001	same as standoff (P)	06, 08, 3	3M, 4M, 5M	A, AA, CR, CRA, T	6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 20, 22, 24	10M, 12M, 15M 20M, 25M, 30M, 35M	R = 0.62" Dia.	R = 15,9mm Dia.	S

Line Clamp Support Accessories available, refer to page 17 in the Mounts Section.

# MOUNTS



Unlock new possibilities in cable and tube routing, blanket installation, and systems retrofit.



## MOUNTS

Click Bond's adhesive-bonded mounts offer enhanced design flexibility for routing of systems and protective blankets in both new construction and retrofit applications. Bonded attachment eliminates drilling and the resulting compromises to structural integrity, cost, and restrictions arising from stress considerations.

Mounts are available with baseplates and bodies manufactured from a variety of metallic and non-metallic materials. The thermoplastic saddles of cable-tie mounts are available in swivel and fixed options with some models offering a latching hasp. Nutplate mounts allow retention of tubing and wire bundles with clamps.

Right angle configurations facilitate support of systems running along frames or through structural lightening holes while standoff mounts and cable trees provide separation between bundles and adjacent structure.

Insulation mounting components comprise a reusable system for retention of thermal and acoustic isolation blankets, featuring easy removal for periodic inspection or blanket replacement. Insulated retainers and isolated mounts deliver the ultimate in low-profile retention of high-performance thermal protection systems.

All mounts are supplied with installation fixtures that enable accurate positioning and clamp the bondline under positive pressure while the adhesive cures, optimizing bond strength and consistency. New internally-featured mounts not only provide a smaller footprint for constrained space applications but also eliminate the traditional fixture removal step and disposable waste.

## APPLICATIONS

### Attachment of:

- Wiring & Cable
- Tubing & Hose
- Lighting
- Insulation Blankets
- Audio / Video Equipment
- Cameras
- Surveillance Equipment
- Acoustic Panels
- Sensors
- Conduit
- Strain Gauges
- Flight Test Equipment

Click Bond's mounts offer designers and installers enhanced flexibility in the routing and attachment of electrical, hydraulic, thermal and acoustic insulation, and other mechanical systems. With no drilling required, our mounts preserve structural integrity while reducing corrosion, fatigue, and costly damage resulting from misdrilled holes.

## Features

- Provides more installation options as location is not limited by hole placement
- Able to attach to fatigue critical structure
- Allows for safe installation in locations where welding or drilling could be hazardous
- Variable standoff heights available
- Saddles/mounts available in various materials to perform in extreme environments
- Simplifies routing of single wires, power cables, and bundles up to 2" diameter
- Saddles are available in several industry standard sizes

## Cable-Tie Mounts

Mounts accommodate industry standard cable ties and straps, as well as Click Bond's own line of high-performance PEEK thermoplastic ties. A wide range of configurations delivers new flexibility in addressing cable routing challenges.



## Insulation Blanket Mounts

Components available to secure acoustic and thermal isolation systems to structure. Threaded and push-on/screw-off options available, allowing easy, repeatable removal for inspection or repair. Insulated thermal blanket-retainers and low-conductivity bonded fasteners combine to provide the ultimate in low-profile thermal isolation.



## Bonded Brackets

Assorted supports provide a range of options for routing cable, pipe, and tubing over, around, and through structural features. This category includes Click Bond's PINCHMOUNT® line of brackets for installation to free flanges without drilling.



## Cable-Tie Mounts *Product images not to scale.*



CB4064



CB4560 & CB4561



CB4564



CB9120 & CB9151



CB9257



CB9302

Basic Part Number	Baseplate Material	Mount Style	Length	Baseplate Style & Size		Fixture Type
				Imperial	Metric	
CB4064	P, U, V (P)	Two-way Standoff	6, 8, 12, 16, 20, 24, 32	R = 1.25" Dia. T = 0.75" Width	NA	S
CB4560	U, V (P)	Standard	NA	1.12" x 0.75"	NA	I
CB4561	U, V (P)	Transverse	NA	1.12" x 0.75"	NA	I
CB4564	P, U, V (P)	Two-way Standoff	6, 8, 12, 16, 20, 24, 32	R = 1.25" Dia. T = 0.75" Width	NA	I
CB9120	V, VC	Standard	NA	1.13" x 0.75"	28,7mm x 19,1mm	S
CB9151	V, VC	Transverse	NA	1.13" x 0.75"	28,6mm x 19,1mm	S
CB9257	V, VC, VCE	Tree	Refer to table below*	1.09" x 0.74"	27,6mm x 18,7mm	S
CB9302	V, VC, VCE	Standard	NA	0.44" x 0.44"	11,2mm x 11,2mm	S
CB9787	V, VC	Transverse	NA	0.44" x 0.44"	NA	S

## Cable-Tie *Product image not to scale.*

Basic Part Number	Material	Size	Length	Width
CB9459	PEEK	3	7.3"	.20"



CB9459

### Material

A = Aluminum  
 AA = Anodized Aluminum  
 C = Carbon/Epoxy, 350°F  
 CR, CRA, CRM = CRES Passivated  
 G = Glass/Epoxy, 250°F Cure  
 E = Glass/Epoxy, 350°F Cure  
 N = Nylon, Natural  
 NB = Nylon, Black, Stabilized  
 NH = Nylon, Heat Stabilized  
 K = Glass-Filled PEKK  
 P = Glass-Filled PEEK  
 T = Titanium (baseplate)  
 Tefzel (saddle)  
 U, V, VB = Glass-Filled PEI (VB = Black)  
 UC, VC, VCE = Carbon-Filled PEI  
 (P) = Optional Primer Available

Lengths			
Code	Size	Code	Size
3	0.187	15	0.937
4	0.250	16	1.000
5	0.312	17	1.062
6	0.375	18	1.125
7	0.437	20	1.250
8	0.500	22	1.375
9	0.562	24	1.500
10	0.625	26	1.625
11	0.687	28	1.750
12	0.750	30	1.875
13	0.812	32	2.000
14	0.875		

*CB9257 Lengths & Mounting Locations			
Code	Length		Mounting Locations
	Imperial	Metric	
1	1.02	25,9	1
2	1.75	44,5	2
3	2.48	63,0	3
4	3.21	81,5	4
5	3.94	100,1	5
None	4.68	118,9	6

### Baseplate Style    Fixture Type

R = Round Base    S = Standard  
 T = Trimmed Base    I = Internal



## Swivel Cable-Tie Mounts *Product images not to scale.*



CB3019



CB4019



CB4020



CB4021



CB4521

Basic Part Number	Baseplate Material	Mount Style	Saddle Material	Length	Baseplate Style & Size	Fixture Type
CB3019	A, AA, CR, CRM, T (P)	Standard	K, N, NB, NH, P, T, V, VC	NA	R = 1.25" Dia. T = 0.75" Width	S
CB4019	C, E, G, U, UC, V, VC (P)	Standard	K, N, NB, NH, P, T, V, VC	NA	R = 1.25" Dia. T = 0.75" Width	S
CB4020	C, E, G, U, UC, V, VC (P)	Right Angle	K, N, NB, NH, P, T, V, VC	6, 8, 12, 16, 24	R = 1.25" Dia. T = 0.75" Width	S
CB4021	C, E, G, U, UC, V, VC (P)	Standoff	K, N, NB, NH, P, T, V, VC	8, 12, 16, 24, 32	1.38" x 0.62"	S
CB4519	U, V, VC	Standard	K, N, NB, NH, P, T, V, VC	NA	R = 1.25" Dia. T = 0.75" Width	I
CB4520	U, UC, V, VC (P)	Right Angle	K, N, NB, NH, P, T, V, VC	6, 8, 12, 16	R = 1.25" Dia. T = 0.75" Width	I
CB4521	U, UC, V, VC (P)	Standoff	K, N, NB, NH, P, T, V, VC	8, 12, 16, 24, 32	1.38" x 0.62"	I

## Line Clamp Supports - Accessories to Studs & Standoffs *Product images not to scale.*



CB9188



CB9212



Basic Part Number	Support Material	Number of Lines	Standoff Distance	Baseplate Size	Mount Method	Hole Diameter
CB9188	P, V, VC	Single	3, 4, 5, 6, 10, 12, 16	1.13" x 0.80"	Stud, Nut & Washer	0.204"
CB9212	P, V, VC	Double	3, 4, 5, 6, 10, 12, 16	1.62" x 0.80"	Stud, Nut & Washer	0.204"

### Material

A = Aluminum  
 AA = Anodized Aluminum  
 C = Carbon/Epoxy, 350°F  
 CR, CRA, CRM = CRES Passivated  
 G = Glass/Epoxy, 250°F Cure  
 E = Glass/Epoxy, 350°F Cure  
 N = Nylon, Natural  
 NB = Nylon, Black, Stabilized

NH = Nylon, Heat Stabilized  
 K = Glass-Filled PEKK  
 P = Glass-Filled PEEK  
 T = Titanium (baseplate)  
 Tefzel (saddle)  
 U, V, VB = Glass-Filled PEI (VB = Black)  
 UC, VC, VCE = Carbon-Filled PEI  
 (P) = Optional Primer Available

### Baseplate Style

R = Round Base  
 T = Trimmed Base

### Fixture Type

S = Standard  
 I = Internal

# Mounts

## Insulation Blanket Mounts *Product images not to scale.*



CB9170 & CB9173



CB9174 & CB9206



CB9208 & CB9210



CB9461



CB9650 & CB9651



CB9653

Basic Part Number	Baseplate Material	Mount Style	Length	Baseplate Style & Size	Fixture Type
CB9170	V	Receptacle	5, 7, 12, 24	R = 0.75" Dia.	S
CB9173	V	Receptacle	7, 12, 24	R = 0.75" Dia.	I
CB9174	V	Retainer	6, 8	R = 1.25" Dia.	NA
CB9206	V	Receptacle	5, 8, 28	R = 1.25" Dia. T = 0.75" Width	S
CB9208	V	Retainer, Variable Grip	.5 to 4.00"	R = 1.25" Dia.	NA
CB9210	V	Receptacle	8, 28	R = 1.25" Dia. T = 0.75" Width	I
CB9461	C, E	Thermally Isolated Stud	5, 6, 7, 8, 9, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32	R = 1.25" Dia.	S
CB9650	CR, (R)	Insulated Retainer, External Thread	4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24	R = 1.25" Dia.	NA
CB9651	CR (R)	Insulated Retainer, Internal Thread	3, 4, 5, 6, 7, 8, 10, 12, 14, 16	R = 1.25" Dia.	NA
CB9653	CR, (R)	Insulated Retainer, Internal Thread	Cap Height 6, 7, 8	R = 1.25" Dia.	NA

## Nutplate Brackets *Product images not to scale.*



CB4022



CB4023



CB4522



CB4523

### Baseplate Style    Fixture Type

R = Round Base    S = Standard  
T = Trimmed Base    I = Internal

Basic Part Number	Baseplate Material	Mount Style	Thread Size		Nut & Retainer Material	Length	Baseplate Style & Size	Fixture Type
			Imperial	Metric				
CB4022	C, E, G, U, UC, V, VC, (P)	Right Angle	08, 3	4M, 5M	CR	6, 8, 12, 16, 24	R = 1.25" Dia. T = 0.75" Width	S
CB4023	C, E, G, U, UC, V, VC, (P)	Standoff	08, 3	4M, 5M	CR	8, 12, 16, 24, 29, 32	1.38" x 0.62"	S
CB4522	U, UC, V, VC, (P)	Right Angle	08, 3	4M, 5M	CR	6, 8, 12, 16	R = 1.25" Dia. T = 0.75" Width	I
CB4523	U, UC, V, VC, (P)	Standoff	08, 3	4M, 5M	CR	8, 12, 16, 24, 32	1.38" x 0.63"	I

## PINCHMOUNT® Bonded Brackets *Product images not to scale.*



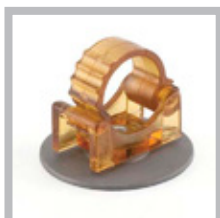
CB4132



CB4233

Basic Part Number	Baseplate Material	Mount Style	Thread Size		Nut & Retainer Material	Length	Grip
			Imperial	Metric			
CB4132	G	Double Nutplate Separation = 0.875"	08, 3	5M	CR	NA	0.03" - 0.28"
CB4231	C, E, G, P, V	Nutplate	08, 3	NA	CR, CRS	NA	0.03" - 0.25"
CB4233	E, G, P, V	Standoff Diameter = 0.50"	06, 08, 3	5M	Standoff: AA, CR, T	8, 9, 10, 11, 12, 13, 14, 15, 16, 18, 20, 22, 24, 32	0.03" - 0.20"

## Clasp & Specialty Mounts *Product images not to scale.*



CB9297



CB9532



CB9205



CB9788



CB9789

Basic Part Number	Baseplate Material	Mount Style	Saddle Material	Length	Baseplate Style & Size	Fixture Type
CB4097	C, E, G, V, VC (P)	Right Angle Clasp	N, V	6, 8, 12, 16, 24	R = 1.25" Dia. T = 0.75" Width	S
CB9297	A, AA, CR, CRM, T (P)	Standard Clasp	N, V	NA	R = 1.25" Dia. T = 0.75" Width	S

Basic Part Number	Description	Size	Hole Diameter
CB9532	Silicon Rubber Cable Clamp Cushion / Use with CB9297	0.562" Dia.	Options between 0.062" and 0.438"

Basic Part Number	Baseplate Material	Mount Style	Baseplate Style & Size	Fixture Type
CB9205	V, VB (P)	Webbing Strap Loop	3.25" x 1.00"	S, I
CB9788	CRM, CRA (P)	Flush Tie-Down Ring	R = 2.63" Dia.	I
CB9789	CRM (P)	Fixed Tie-Down Ring	R = 2.00" Dia.	I

Lengths			
Code	Size	Code	Size
3	0.187	15	0.937
4	0.250	16	1.000
5	0.312	17	1.062
6	0.375	18	1.125
7	0.437	20	1.250
8	0.500	22	1.375
9	0.562	24	1.500
10	0.625	26	1.625
11	0.687	28	1.750
12	0.750	30	1.875
13	0.812	32	2.000
14	0.875		

### Material

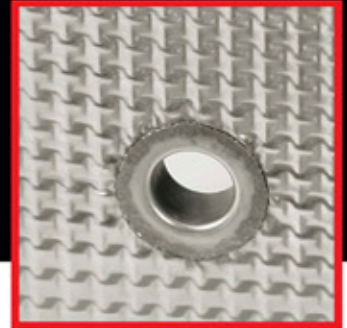
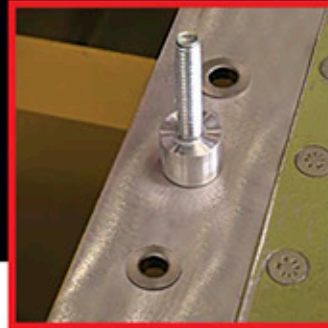
- A = Aluminum
- AA = Anodized Aluminum
- C = Carbon/Epoxy, 350°F
- CR, CRA, CRM = CRES Passivated
- G = Glass/Epoxy, 250°F Cure
- E = Glass/Epoxy, 350°F Cure
- N = Nylon, Natural
- NB = Nylon, Black, Stabilized
- NH = Nylon, Heat Stabilized
- K = Glass-Filled PEKK
- P = Glass-Filled PEEK
- T = Titanium (baseplate) Tefzel (saddle)
- U, V, VB = Glass-Filled PEI (VB = Black)
- UC, VC, VCE = Carbon-Filled PEI
- (P) = Optional Primer Available
- (R) = Optional Ribbed Surface

- Baseplate Style**  
 R = Round Base  
 T = Trimmed Base
- Fixture Type**  
 S = Standard  
 I = Internal

# ACRES® SLEEVES



Prevent and repair oversize hole conditions, economically.



## ACRES SLEEVES

Click Bond ACRES® sleeves offer an economical solution for delivering enhanced structural fatigue life and engineered repairs. Their deep-drawn method of manufacture delivers unmatched performance and precision.

These thin-wall, deep-drawn stainless steel sleeves are designed to prevent oversize hole conditions resulting from corrosion, manufacturing error, or in-service fatigue and address them when they occur.

In contrast to traditional repair methods, installation of our bonded repair sleeves return damaged holes to nominal diameter. Alternatively, BOLTMOD sleeves modify the a nominal bolt or pin to first or second oversize diameter. In either case, the requirement for costly and long lead oversize fasteners is eliminated

In new structural composite skins and covers, our sleeves offer protection from moisture intrusion, hole wear, and damage from repeated fastener insertions.

The proprietary Click Bond installation fixture accurately controls the installed depth of the sleeve during adhesive cure, ensuring a flush head condition for subsequent installation of a countersunk bolt.

Various fit configurations for structural pins and panel fasteners of all standard head geometries are available.

### APPLICATIONS

- Oversize Hole Correction
- Hole Protection
- Corrosion Repair
- Aluminum Structures
- Skin Panels
- Composite Structures
- Structural Components
- Access Panels
- Fairings
- Doors
- Honeycomb Panels
- Thermal Insulation Blankets

Click Bond ACRES sleeves are designed to address a variety of needs in both manufacturing and repair scenarios. These products are divided into two basic categories, PANDOR® and BOLTMOD®, each satisfying the requirements of a particular sleeve application.

## Features

- Eliminates costly, long lead-time, oversize fasteners
- Prolongs the life of structural composite panels
- Repairs damage from structural corrosion and misdrilled holes
- Compatible with protruding head, 100 degree, and 130 degree fastener heads
- A-286 stainless steel construction for longevity and corrosion prevention
- Depth control installation fixture ensures fastener head flushness in countersunk holes

## PANDOR®

PANDOR sleeves protect holes in panels, doors, covers, and skins, preventing hole damage from fastener insertion, in-service wear, or environmental intrusion. Clearance fit to nominal diameter fasteners.



## BOLTMOD®

BOLTMOD sleeves, named for their ability to modify bolts and pins, permit the creation of a first-oversize or second-oversize fastener at greatly reduced cost. Interference fit to nominal diameter fasteners.



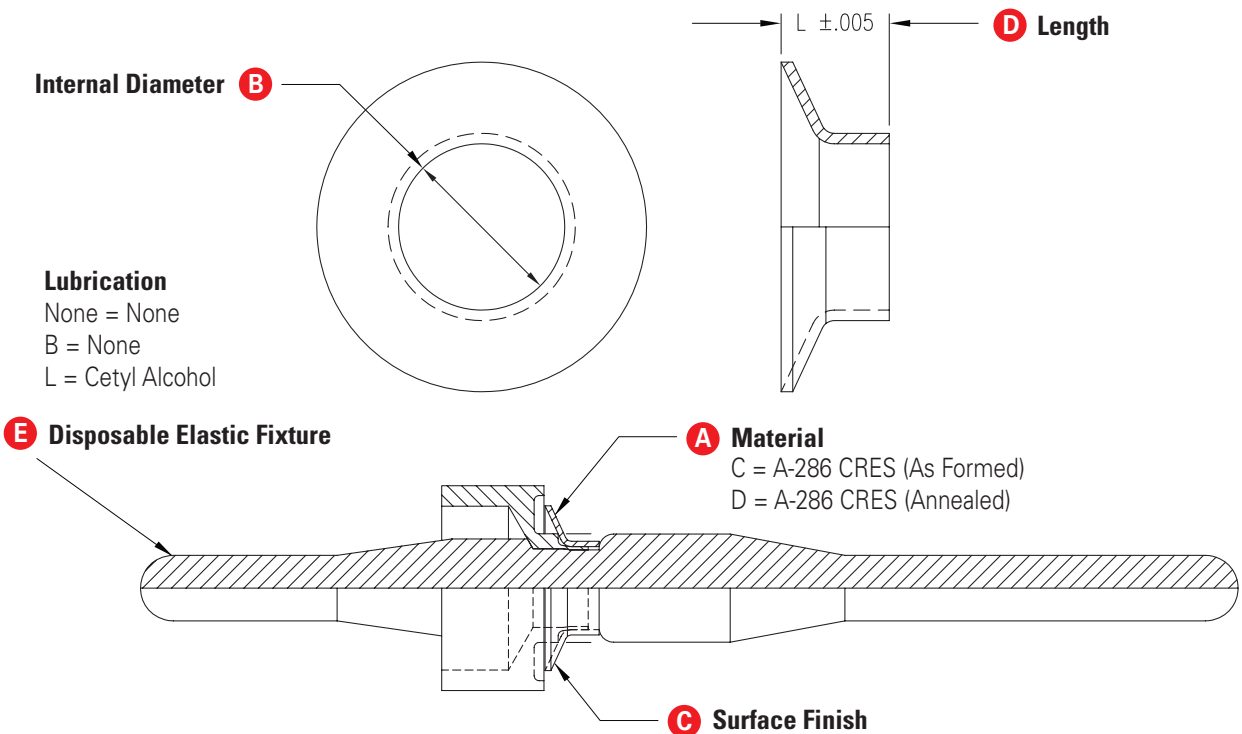
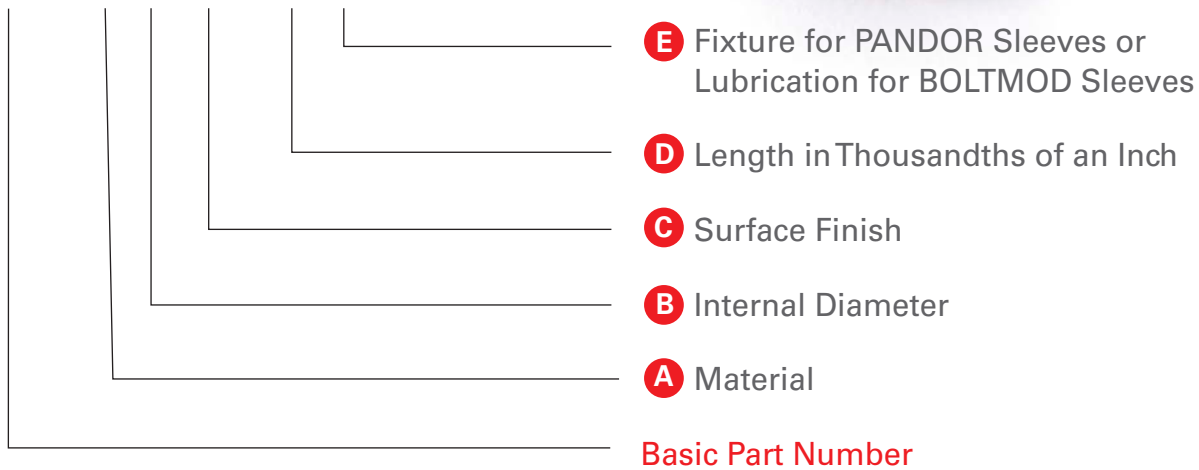
## How Our Part Numbers Work

This product guide lists the basic part numbers (for example, CB5948). The full part number is specified by adding further details to the basic part number, such as material and fastener diameter codes. A sample part number is illustrated here as an example. A representative of Click Bond Sales will help you determine the right part number for your application.



## Diagramming a Part Number

**CB5948 C 08 B 165 N**



## How Our Part Tables Work

CB5948	08	B	N	
Basic Part Number	Internal Diameter	Surface Finish	Fixture Type	Head Style
CB5948	55, 06, 08, 10, 12	-, B, P, AC	None, E, N	130° Flush, Second Oversize

### Internal Diameters

Imperial Internal Diameters	
Code	Size
05	0.1562
55	0.1640
06	0.1900
08	0.2500
10	0.3125
12	0.3750
14	0.4375
16	0.5000

Metric Internal Diameters	
Code	Size
04	4,0
05	5,0
06	6,0
08	8,0
10	10,0
12	12,0

### Surface Finishes & Fixture Types

#### Surface Finish

- , N = None  
 B = Powder Blast  
 C = CAD Plate  
 P = Epoxy Primer  
 AC = Aluminum Coat

#### Fixture Type

None = Gage, Elastic & Retainer  
 E = Elastic & Retainer  
 N = No Fixture



## PANDOR® Clearance Fit Sleeves *Product images not to scale.*



CB5906



CB5907



CB5908



CB5946



CB5947



CB5948

Basic Part Number	Internal Diameter	Surface Finish	Fixture Type	Head Style
CB5906	55, 06, 08, 10, 12	–, B, C, P, AC	None, E, N	100° Flush Tension
CB5907	55, 06, 08, 10, 12	–, B, C, P	E, N	Protruding
CB5908	55, 06, 08, 10, 12	–, B, P, AC	None, E, N	130° Flush
CB5946	55, 06, 08, 10, 12	–, B, C, P, AC	None, E, N	100° Flush Tension, Second Oversize
CB5947	55, 06, 08, 10, 12	–, B, C, P	E, N	Protruding, Second Oversize
CB5948	55, 06, 08, 10, 12	–, B, P, AC	None, E, N	130° Flush, Second Oversize

Imperial Internal Diameters	
Code	Size
05	0.1562
55	0.1640
06	0.1900
08	0.2500
10	0.3125
12	0.3750
14	0.4375
16	0.5000

Metric Internal Diameters	
Code	Size
04	4,0
05	5,0
06	6,0
08	8,0
10	10,0
12	12,0

### Surface Finish

–, N = None  
 B = Powder Blast  
 C = CAD Plate  
 P = Epoxy Primer  
 AC = Aluminum Coat

### Fixture Type

None = Gage, Elastic & Retainer  
 E = Elastic & Retainer  
 N = No Fixture





## BOLTMOD® Interference Fit Sleeves *Product images not to scale.*



JK5501 & JK5541



JK5502



JK5506



JK5507



JK5701 & JK5702



JK5706



JK5542



JK5546



JK5547



JK5721



JK5722



JK5726

Basic Part Number	Internal Diameter	Surface Finish	Head Style
JK5501	05, 55, 06, 08, 10, 12	N, C	Protruding Shear, First Oversize Diameter
JK5502	05, 55, 06, 08, 10, 12, 14, 16	N, C	100° Flush Shear, First Oversize Diameter
JK5506	05, 55, 06, 08, 10, 12, 14, 16	N, C	100° Flush Tension, First Oversize Diameter
JK5507	05, 55, 06, 08, 10, 12, 14, 16	N, C	Protruding Tension, First Oversize Diameter
JK5541	06, 08, 10, 12	N, C	Protruding Shear, Second Oversize Diameter
JK5542	06, 08, 10, 12, 14, 16	N, C	100° Flush Shear, Second Oversize Diameter
JK5546	06, 08, 10, 12, 14, 16	N, C	100° Flush Tension, Second Oversize Diameter
JK5547	06, 08, 10, 12	N, C	Protruding Tension, Second Oversize Diameter
JK5701	04, 05, 06, 08, 10, 12	N, AC	Protruding, Metric, First Oversize Diameter
JK5702	04, 05, 06, 08, 10, 12	N, AC	100° Flush Shear, Metric, First Oversize Diameter
JK5706	04, 05, 06, 08, 10, 12	N, AC	100° Flush Tension, Metric, First Oversize Diameter
JK5721	04, 05, 06, 08, 10, 12	N, AC	Protruding, Second Oversize Diameter, Metric
JK5722	05, 06, 08, 10, 12	N, AC	100° Flush Shear, Second Oversize Diameter, Metric
JK5726	04, 05, 06, 08, 10, 12	N, AC	100° Flush Tension, Second Oversize Diameter, Metric

# BUSHINGS

Unlocking the potential of modern lightweight structural materials.



# BUSHINGS

Click Bond adhesive-bonded bushings enable construction using lightweight structures manufactured from composite sandwich structures with crush-sensitive or low strength core materials such as honeycomb or foam. They provide localized reinforcement and strongpoints for threaded attachment.

Bushings also enhance the performance of thin metallic structure, providing localized reinforcement without welding. Additionally, they replace potted inserts, simplifying installation, reducing weight, and delivering installed cost savings.

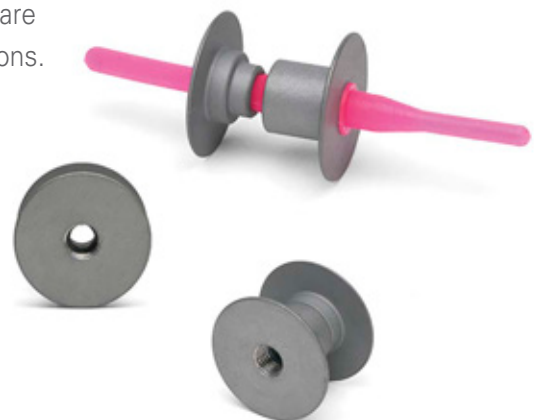
Click Bond bushings are offered in several configurations including locking, non-locking, blind, through-hole, countersunk, 1-piece, 2-piece, and threaded varieties. A range of flange diameters and grip lengths are available as are both Imperial and metric thread sizes.

The accompanying disposable installation fixtures offer rapid, consistent installation as well as continuous clamping of the joint during cure, ensuring a strong bond. Internal elastic fixtures are available with select bushings for reduced footprint applications.

## APPLICATIONS

### Reinforced Attachment of:

- Sandwich Panel Structures
- Floorboards
- Fairings & Shrouds
- Access Panels
- Hinges & Latches
- Brackets & Clips
- Systems Components



Click Bond adhesive-bonded bushings improve the process of assembling and securing secondary components to structures manufactured from materials requiring local reinforcement, such as composite sandwich panels used in lightweight interiors. These products eliminate the invasive preparation processes and weight gain traditionally associated with potted inserts while preventing ingress of water to composite panel core materials.

## Features

- Installation fixture delivers optimal bond strength and repeatable, reliable installations
- Eliminates need for panel undercutting and potting, reducing weight and labor
- Provides localized tensile, shear, and compression strength to sandwich structures
- Prevents moisture incursion to through panel sandwich panel core material
- Improves longevity of attachment points in low strength or soft materials
- Available in stainless steel, aluminum, titanium, and composite materials
- Imperial and metric threadforms in diameters 04-40 to 1/2-20 and from M3 to M10
- Blind, through-hole, and locking thread variants available

## Threaded Bushings

Threaded, blind thread, locking thread, and spacer bushings enable localized reinforcement and attachment to panel structure.



## Through-Hole Bushings

Through-hole spacer bushings provide localized compressional reinforcement of panel structure. Countersunk versions permit flush screw attachment.

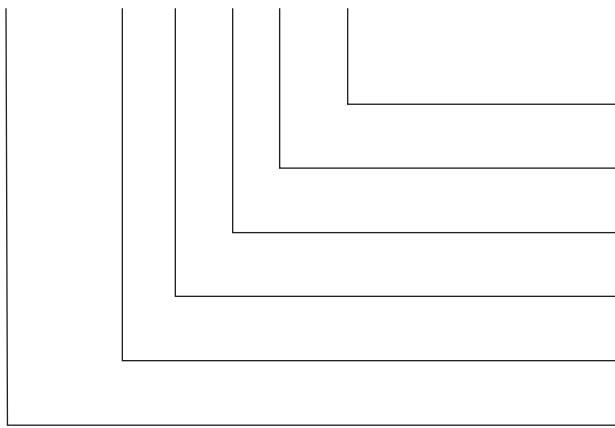


## How Our Part Numbers Work

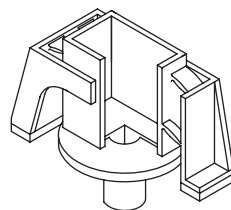
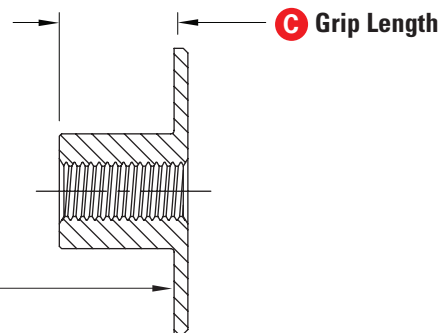
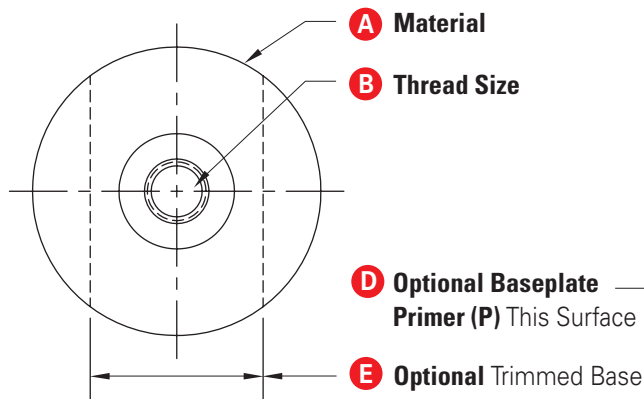
This product guide lists the basic part numbers (for example, CB3005). The full part number is specified by adding further details, such as material and thread codes, to the basic part number. A sample part number is illustrated here as an example. A representative of Click Bond Sales will help you determine the right part number for your application.

### Diagramming a Part Number

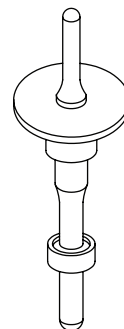
**CB3005 CR 3 -12 P 750**



**Basic Part Number**



**S** = Standard Fixture



**E** = Elastic Fixture

## How Our Part Tables Work

CB3005		CR		3		12		Fixture Type
Basic Part Number	Material	Thread Size		Grip Length		Baseplate Style & Size		
		Imperial	Metric	Imperial	Metric	Imperial	Metric	
CB3005	A+, CR, CRA, CRM (P)	08, 3, 4, 5, 6, 324, 420, 518, 616	5M, 6M, 8M, 8MC	4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24	10M, 12M, 15M, 20M, 25M	R = 1.25" Dia. T = 0.75" Width	R = 31,8mm Dia. T = 19,1mm	S

### Material Options

A = Aluminum  
 A+, AA = Anodized Aluminum  
 AC = Aluminum with Chemical Conversion Coating  
 CR, CRA, CRM = CRES Passivated  
 CV = Invar  
 T = Titanium  
 V = Glass-Filled PEI  
 (P) = Optional Primer Available

### Baseplate Styles



R = Round Base      T = Trimmed Base

### Thread Sizes and Grip Lengths

Fine Thread Sizes			
Imperial		Metric	
Code	Size	Code	Size
04	.1120-40	3M	MJ3 x 0,5
06	.1380-32	4M	MJ4 x 0,7
08	.1640-32	5M	MJ5 x 0,8
3	.1900-32	6M	MJ6 x 1,0
4	.2500-28	8M	MJ8 x 1,25 or 1,0
5	.3125-24	10M	M10 x 1,5
6	.3750-24		

Coarse Thread Sizes			
Imperial		Metric	
Code	Size	Code	Size
324	.1900-24	8MC	M8 x 1,25
420	.2500-20		
518	.3125-18		
616	.3750-16		

Grip Lengths			
Imperial		Metric	
Code	Size	Code	Size
04	.250	10M	10
06	.375	12M	12
08	.500	15M	15
10	.625	20M	20
12	.750	25M	25
14	.875		
16	1.000		
18	1.125		
20	1.250		
22	1.375		
24	1.500		

NOTE: Custom grip lengths available upon request.



# Bushings

## Threaded Bushings *Product images not to scale.*



CB3005



CB5005



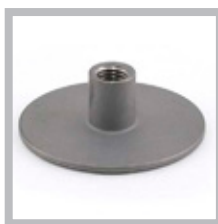
CB5006



CB9060



CB9061



CB9084



CB9085



CB9101

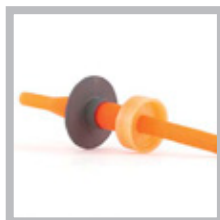


CB9112

Basic Part Number	Material	Thread Size		Grip Length		Baseplate Style & Size		Fixture Type
		Imperial	Metric	Imperial	Metric	Imperial	Metric	
CB3005	A+, CR, CRA, CRM (P)	08, 3, 4, 5, 6, 324, 420, 518, 616	5M, 6M, 8M, 8MC	4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24	10M, 12M, 15M, 20M, 25M	R = 1.25" Dia. T = 0.75" Width	R = 31,8mm Dia. T = 19,1mm	S
CB5005	A+, CR, CRA, CRM, T (P)	04, 06, 08, 3, 4, 324, 420	3M, 4M, 5M	*0.060" to 0.180" Min.	3M Min.	*R = 0.50" to 1.0" Dia.	*R = 15,9mm to 19,1mm	S
CB5006	A+, CR, CRA, CRM, T (P)	06, 08, 3, 4, 324, 420	3M, 4M, 5M	*0.100" to 0.180" Min.	3M Min.	*R = 0.62" to 1.00" Dia.	*R = 15,9mm to 19,1mm	E
CB9060	A, AA, CR, CRA, T	3, 4, 5, 324, 420, 518	NA	8, 10, 12, 14, 16	NA	R = 1.25" Dia. T = 0.75" Width	NA	S
CB9061	A, AA, CR, T	06, 08, 3, 4, 5, 6, 324, 420	5M, 6M, 8M, 10M	*0.450" to 0.625" Min.	*13,0mm to 18,5mm Min.	*R = 0.62" to 1.25" Dia. T = 0.75" Width	*R = 22,1mm to 31,8mm T = 19,1mm	E
CB9084	A+, CR, CRA (P)	3, 4, 5, 420, 518	5M, 6M, 8M	6, 8, 10, 12, 14, 16	10M, 12M, 15M, 20M, 25M	R = 1.25" Dia. T = 0.75" Width	R = 31,8mm T = 19,1mm	S
CB9085	A+, CR, CRA	08, 3	NA	*0.130" or 0.155" Min.	NA	R = 0.62" Dia.	NA	S, E
CB9101	CR (P)	08, 3, 324	NA	8, 10, 12, 14, 16	NA	R = 0.62" Dia.	NA	S
CB9112	A+, CR, CRA	06, 08, 3	NA	*0.105 to 0.155 Min.	NA	R = 0.62" Dia.	NA	E

\*Grip Length Minimum & Baseplate Size vary based on Thread Size

## Through-Hole Bushings *Product images not to scale.*



CB5007



CB9029



CB9077



CB9122

Basic Part Number	Material	Fastener / Hole Size		Baseplate Style & Size		Fixture Type
		Imperial	Metric	Imperial	Metric	
CB5007	A+, CR, CRA, CRM, T (P)	0.1410" to 0.2570"	3,1 to 10,1	*R = 0.62" to 1.00" Dia.	*R = 16,0mm to 38,0mm Dia.	E
CB9029	A, AA, AC, CR, CV, T, V	0.145" to 0.390"	3,3 to 10,3	*R = 0.62" to 1.25" Dia.	*R = 15,8mm to 31,8mm Dia.	E
CB9077	A, AA, CR	0.145" to 0.390"	NA	*R = 0.62" to 1.25" Dia.	NA	E
CB9122	A, AA, CR, CRA	0.170"	NA	R = 0.75" Dia.		E

\*Baseplate Size varies based on Fastener / Hole Size

### Fine Thread Sizes

Imperial		Metric	
Code	Size	Code	Size
04	.1120-40	3M	MJ3 x 0,5
06	.1380-32	4M	MJ4 x 0,7
08	.1640-32	5M	MJ5 x 0,8
3	.1900-32	6M	MJ6 x 1,0
4	.2500-28	8M	MJ8 x 1,25 or 1,0
5	.3125-24	10M	M10 x 1,5
6	.3750-24		

### Coarse Thread Sizes

Imperial		Metric	
Code	Size	Code	Size
324	.1900-24	8MC	M8 x 1,25
420	.2500-20		
518	.3125-18		
616	.3750-16		

### Grip Lengths

Imperial		Metric	
Code	Size	Code	Size
04	.250	10M	10
06	.375	12M	12
08	.500	15M	15
10	.625	20M	20
12	.750	25M	25
14	.875		
16	1.000		
18	1.125		
20	1.250		
22	1.375		
24	1.500		

NOTE: Custom grip lengths available upon request.

#### Material

A = Aluminum  
 A+, AA = Anodized Aluminum  
 AC = Aluminum with Chemical Conversion Coating  
 CR, CRA, CRM = CRES Passivated  
 CV = Invar  
 T = Titanium  
 V = Glass-Filled PEI  
 (P) = Optional Primer Available

#### Baseplate Style

R = Round Base  
 T = Trimmed Base

#### Fixture Type

S = Standard  
 E = Elastic

# Global Reach. Personal Touch.



Our growing global network of production facilities, field support professionals, and authorized distributors ensures that your needs are met with rapid, capable response and personal attention.





A current directory of global support and authorized distribution is available at [www.clickbond.com](http://www.clickbond.com).

# ADHESIVES

Structural adhesives that excel in the most challenging environments.



# ADHESIVES

Click Bond's total solution approach to adhesive-bonded fastening takes our product line beyond the hardware. We continually research emerging adhesive technologies and partner with industry-leading chemical manufacturers to provide an assortment of industry-leading acrylic and epoxy structural adhesives, as well as polysulfide sealants.

Each is tailored for its suitability for high strength adhesive-bonded fastener installation to metallic, composite, and thermoplastic substrates. These materials are particularly selected for their durability under exposure to a wide range of demanding environments including heat and cold, high humidity, and immersion in fuels and fluids.

Our adhesives are qualified to multiple aerospace OEM specifications and are packaged in convenient twin-pack cartridges that minimize errors in component ratio and mix consistency. A complementary range of dispensers, ratio slides, and disposable static mixing tips are available to facilitate adhesive application.

All Click Bond adhesive-bonded fasteners include an installation fixture that allows accurate positioning and clamps the fastener under positive pressure while the adhesive cures, optimizing bond strength and consistency of results.



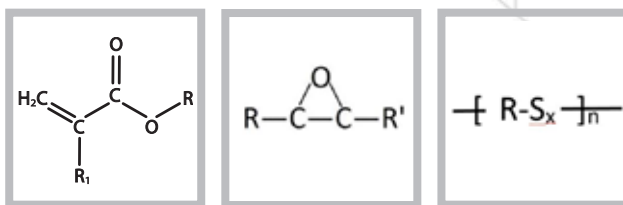
Click Bond packages a selection of leading structural adhesives in convenient twin-pack cartridges. This packaging method, incorporating the use of a disposable static mixing tip, simplifies adhesive preparation and dispensing while eliminating component ratio errors and inconsistency associated with manual measurement and mixing.

## Features

- Resealable cartridges reduce adhesive waste
- Static mixing tips ensure consistent and thorough component blending
- Dispensing tools and slides available for various component ratios
- Industry standard adhesives from Hysol, Lord, and 3M available
- Convenient 40 or 50 ml cartridges for production
- Adhesive available in small packets in kits, convenient for repair and small jobs
- Kits with Click Bond fasteners and adhesives available

## Adhesive Products

Structural adhesives are available to address high temperature, fuel and fluid immersion, high shock, and low outgas requirements. A representative of Click Bond Sales will help you determine the right adhesive for your application.



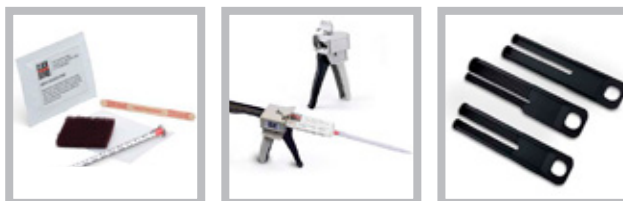
## Adhesive Cartridges & Kits

All our structural adhesives are available in convenient twin-pack cartridges. A wide range of kits are also available that include adhesive packets, fasteners, and all required surface prep materials, suitable for repair or field installations.



## Adhesive Dispensers & Accessories

A range of dispensing equipment, designed for use with twin-pack cartridges, is available. Using this dispensing method in conjunction with static mixing tips simplifies adhesive preparation, while eliminating component ratio errors associated with hand mixing.



## Adhesive Products

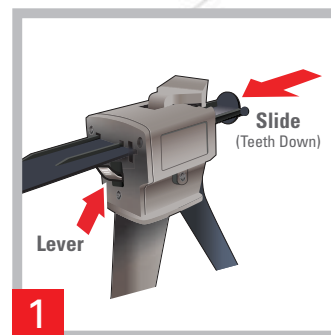
Part Number	Adhesive Type	Features	Working Time	Handling Strength
CB200	Acrylic Structural Adhesive	<ul style="list-style-type: none"> <li>Bonds a wide variety of metals, engineering plastics, and composites</li> <li>Cures quickly at room temperature.</li> <li>Bonds irregular shapes and inaccessible surfaces</li> <li>Excellent environmental and chemical resistance</li> <li>Water resistant</li> </ul>	5 min	30 min
CB250	Acrylic Structural Adhesive	<ul style="list-style-type: none"> <li>Bonds ABS, PVC, acrylic, styrene, metals, wood, and ceramics</li> <li>High shear, peel, and impact strength</li> <li>Cures quickly at room temperature</li> <li>Bonds gaps from 0.003 - 0.125 inches</li> <li>Excellent environmental resistance</li> </ul>	5 min	30 min
CB300	Epoxy Structural Adhesive	<ul style="list-style-type: none"> <li>Bonds to most substrates including metal, wood, concrete, ceramics and many plastics</li> <li>Recommended for fast patching, fixturing, and other repairs requiring quick handling strength</li> <li>Excellent fast-setting general purpose adhesive</li> </ul>	3 min	15 - 30 min
CB301	Epoxy Structural Adhesive	<ul style="list-style-type: none"> <li>Bonds a wide variety of metals</li> <li>Good peel and shear strength</li> </ul>	5 min	24 hrs
CB309	Epoxy Structural Adhesive	<ul style="list-style-type: none"> <li>Bonds metals, FRP, wood, rubber, and other materials</li> <li>Excellent environmental and chemical resistance</li> <li>Ideal for gap filling and use on vertical surfaces</li> </ul>	90 - 120min	8 - 16 hrs
CB359	Epoxy Structural Adhesive	<ul style="list-style-type: none"> <li>Bonds a wide variety of metals, thermoplastics, wood, concrete and composites</li> <li>High peel, tensile, and lap shear strength</li> <li>Low outgassing</li> <li>Excellent resistance to water, salt spray, and organic fluids</li> </ul>	60 min	24 hrs
CB394	High Temperature Epoxy Structural Adhesive	<ul style="list-style-type: none"> <li>Bonds metals, many thermoplastics, and thermoset composites</li> <li>Excellent strength to 350°F / 177°C and higher</li> <li>Low outgassing</li> <li>Ideal for potting, filling, and liquid shim applications</li> </ul>	90 min	24 hrs
CB420 CB420E*	Acrylic Structural Adhesive	<ul style="list-style-type: none"> <li>Bonds ABS, acrylics, aluminum, FRP, PVC, carbon steel, and stainless steel</li> <li>Cures quickly at room temperature</li> <li>High strength, excellent fatigue endurance, outstanding impact resistance, and superior toughness</li> <li>Excellent environmental and chemical resistance</li> </ul>	4 - 6 min	15 - 18 min
CB440	Polysulfide Sealant	<ul style="list-style-type: none"> <li>Designed for fillet sealing of fuel tanks and other sealing applications</li> <li>Maintains excellent elastomeric properties after prolonged exposure to both jet fuel and aviation gas</li> <li>Excellent flexibility for high-shock environments</li> <li>Cures at room temperature</li> <li>Excellent resistance to water, salt water, alcohols, petroleum-base and synthetic lubricating oils, and petroleum-base hydraulic fluids</li> </ul>	30 min	10 hrs

\* REACH compliant version developed for European market.

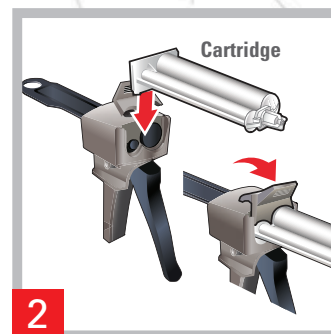
**Note:** All times measured at 75°F (24°C) and are significantly affected by temperature. Refer to adhesive data sheet for more details.

Full Cure	Strength		Service Temp Range
	Shear (ASTM D1002)	Peel (ASTM D1876)	
24 hrs	4400 psi (30.3 MPa)	21 pli (3.7 kN/m)	-67°F - 250°F (-55°C - 121°C)
24 hrs	3500 psi (24.1 MPa)	37 pli (6.5 kN/m)	-67°F - 250°F (-55°C - 121°C)
60 min	3000 psi (20.7 MPa)	1.8 pli (0.3 kN/m)	-40°F - 180°F (-40°C - 82°C)
7 days	4500 psi (31.0 MPa)	50 pli (8.8 kN/m)	-67°F - 250°F (-55°C - 121°C)
24 - 48 hrs	1550 psi (10.7 MPa)	2.2 pli (0.4 kN/m)	-30°F - 250°F (-34°C - 121°C)
5 - 7 days or 1 hr at 180°F (82°C)	4500 psi (31.0 MPa)	60 pli (10.5 kN/m)	-67°F - 200°F (-55°C to 93°C)
3 - 5 days or 1 hr at 150°F (65°C)	4200 psi (30.0 MPa)	5 pli (0.9 kN/m)	-67°F - 350°F
24 hrs	3050 psi (21.0 MPa)	28 pli (4.9 kN/m)	-40°F - 250°F (-40°C - 121°C)
30 hrs	N/A	25 pli (4.4 kN/m)	-65°F - 250°F (-54°C - 121°C), with intermittent excursions up to 275°F (135°C)

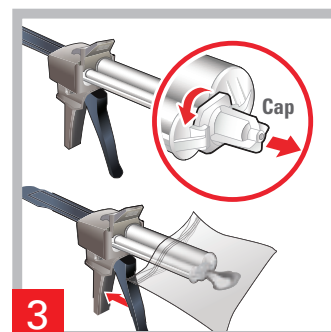
## Easy Dispenser Assembly



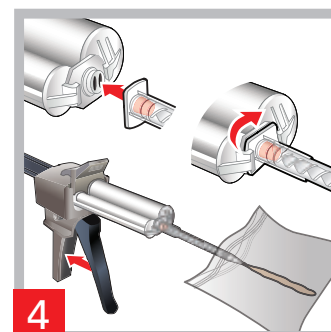
1 Insert Slide



2 Insert Cartridge



3 Remove End Cap and Check



4 Attach Mixing Tip and Check

## Adhesive Cartridges & Kits

Part Number	Adhesive Type
CB91	CB200 3.5g Acrylic Adhesive Kit
CB92	CB200 3.5g Acrylic Adhesive Kit with Surface Prep Materials
CB93	CB300 4.0g Epoxy Adhesive Kit
CB94	CB300 4.0g Epoxy Adhesive Kit with Surface Prep Materials
CB95	CB200 40ml Acrylic Adhesive Cartridge with Mixing Tip
CB96	CB440 5.0g Sealant Kit with Surface Prep Materials
CB97	CB301 50ml Epoxy Adhesive Cartridge with Mixing Tip
CB98	CB200 40ml Acrylic Adhesive Cartridge with Mixing Tips and Surface Prep Materials
CB200-40	CB200 40ml Acrylic Adhesive Cartridge
CB250-50	CB250 50ml Acrylic Adhesive Cartridge
CB301-50	CB301 50ml Epoxy Adhesive Cartridge
CB309-50	CB309 50ml Epoxy Adhesive Cartridge
CB359-50	CB359 50ml Epoxy Adhesive Cartridge
CB394-43	CB394 43ml Epoxy Adhesive Cartridge
CB420-50	CB420 35ml Acrylic Adhesive Cartridge
CB420-50E	CB420E 35ml Acrylic Adhesive Cartridge (REACH compliant version)



## Adhesive Dispensers & Accessories

Part Number	Description
CB11	Adhesive Dispenser Slide, 1:1 Ratio, for use with CB100 Adhesive Dispenser used with CB250-50 & CB309-50 Adhesive Cartridges
CB21	Adhesive Dispenser Slide, 2:1 Ratio, for use with CB100 Adhesive Dispenser used with CB301-50 & CB359-50 Adhesive Cartridges
CB41	Adhesive Dispenser Slide, 4:1 Ratio, for use with CB100 Adhesive Dispenser used with CB394-43 Adhesive Cartridge
CB81	Adhesive Dispenser Slide, 8:1 Ratio, for use with CB100 Adhesive Dispenser used with CB200-40, CB420-50 & CB420-50E Adhesive Cartridges
CB100	Adhesive Dispenser
CB106	Adhesive Dispenser Mixing Tip for all Click Bond Adhesive Cartridges
CB904	Disposable Abrasive Pad
CB911	Solvent Wipe



## ***Our Work is Measured Against the Highest Standards***

**Click Bond is certified to the latest revisions of the ISO 9001 and AS9100 manufacturing process, and ISO 14001 environmental management standards.**

As a provider of solutions supporting industry's highest performance applications, we recognize the criticality of delivering the highest quality products and that the ability to do so requires the highest quality processes. Quality is a commitment and responsibility shared between Click Bond, our supplier partners, and our customers.

Our team of internal auditors regularly reviews every aspect of Click Bond operations to verify that our company's systems and processes meet or exceed the requirements of these rigorous standards. Their reviews are validated by regular third party registrar and customer audits.

Click Bond's commitment to these standards is a source of pride. They provide critical oversight of the quality of our processes and, by extension, that of our products. Each demands continual improvement in our operations, stimulating innovation, quality, and delivery of increasing value to our customers.



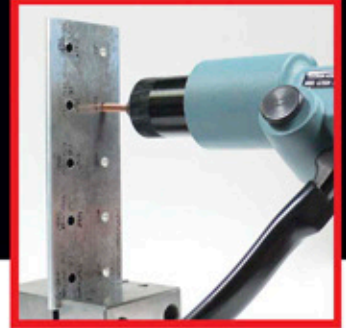
***Click Bond will consistently design, produce, and sell good product; comply with the requirements of AS9100 and ISO 14001; and continually improve the quality and environmental management system.***

***- Click Bond Quality Policy***



# TOOLS

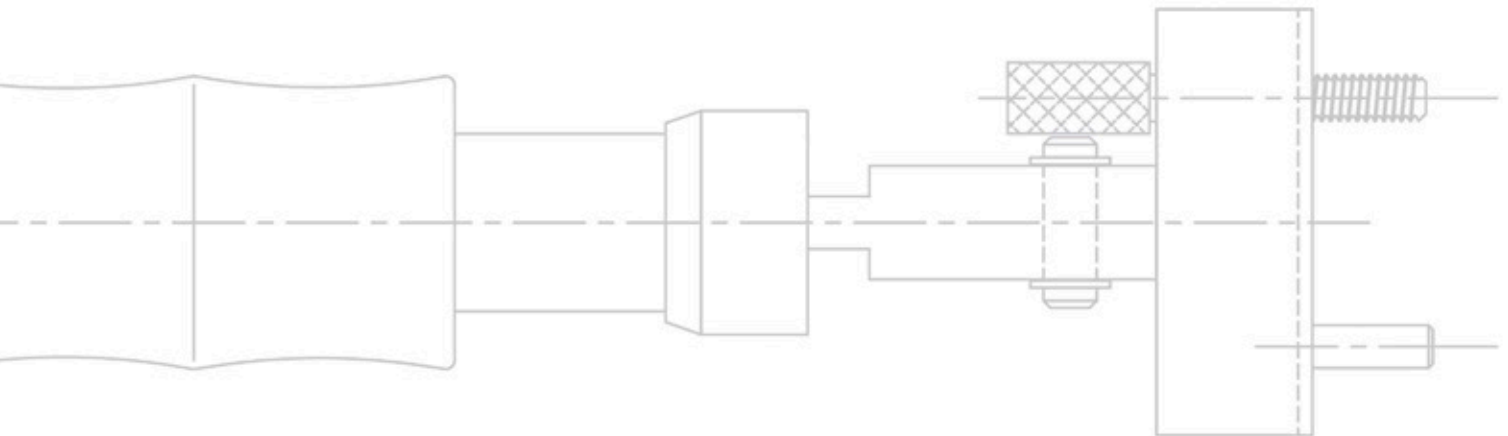
Tools engineered to facilitate installation and ensure strong bonds.



# TOOLS

Our innovative approach to fasteners, regarding them as a system, extends to the tools we developed to support our products and enable their fast, consistent installation. Many of these are inspired by specific customer needs but resulted in capable, quality tools of benefit in wider application.

Click Bond mandrel pulling tools assist with the proper installation of our products incorporating flared or expanded sleeves. Calibrated bond strength testers confirm successful installation of adhesive-bonded fastener products, assist in validation of new or modified materials and processes, and verify effectiveness of installer training.





Click Bond provides a range of installation and bond strength validation tools for use in conjunction with our bonded fastener products. Mandrel pulling tools facilitate proper installation of flared sleeves and FLEXBOND expanded sleeve nutplates. Bond strength testers verify proper installation of Click Bond nutplates and most studs, standoffs, and mounts.

## Features

- Installation tools for actuation of integral mandrels supplied with sleeved nutplates
- Bond strength testers deliver proof loading to Click Bond nutplates and select systems installation products

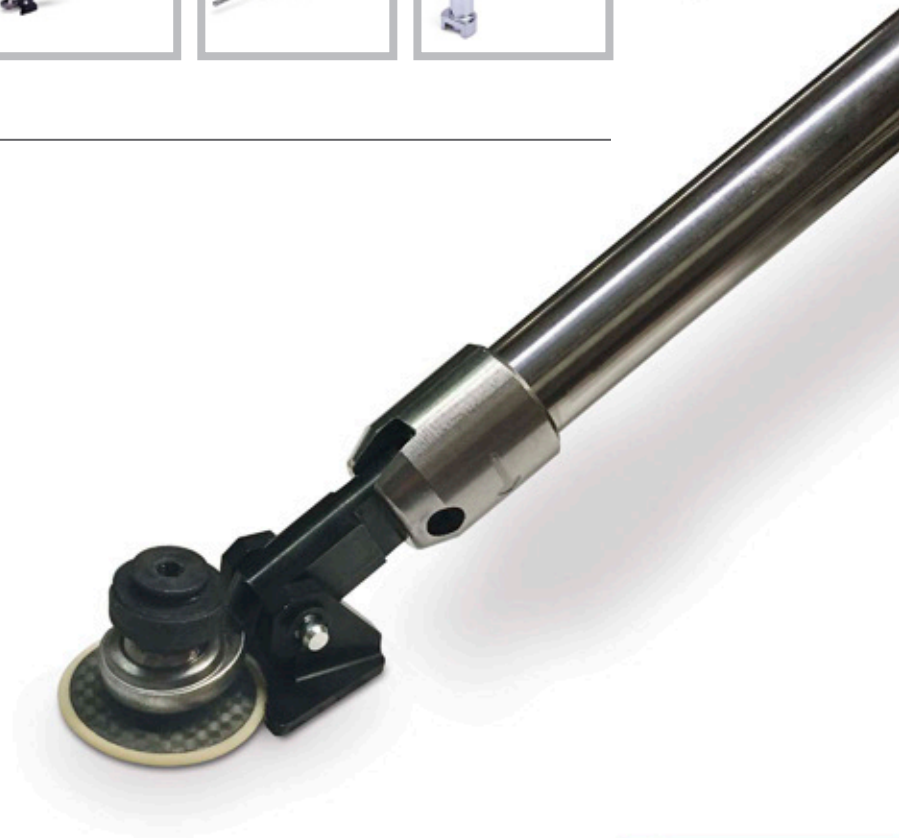
## Mandrel Pulling Tools

Installation tools complement certain Click Bond fastener products requiring actuation of mandrels for sleeve flaring or expansion.



## Bond Strength Testers

Bond strength testers permit verification of successful fastener installation following adhesive cure. Testers increase confidence in surface and adhesive preparation, particularly during process development and new installer familiarization.



## Mandrel Pulling Tools

Basic Part Number	Description
CB135	Flare Sleeve, Extended Float Repair Mandrel
CB747	Pneumatic Pulling Tool
CB749	Pulling Head
CB755	Auto Release Pulling Head
CB757	Pulling Head With 100° Nose piece (Used With Pneumatic Pulling Tool)
CB758	Limited Clearance Manual Pulling Tool
CB759	Auto Release, Flare Bond Pneumatic Pulling Tool
CB765	Pneumatic Pulling Tool for Installation of CB6490 Size 3 Nutplates
CB766	Cold Work Pulling Head
CB768	Pneumatic Pulling Tool
CB771	Sleeve Flaring Manual Pulling Tool
CB772	Manual Pulling Tool for Installation of CB6309 Nutplates
CB773	Manual Pulling Tool for Installation of CB6490 Nutplates
CB774	Manual Pulling Tool
CB776	Manual Pulling Tool for Installation of CB9530 Nutplates



Product images not to scale.

## Bond Strength Testers

Basic Part Number	Description
CB602	Nutplate Pushoff Strength Tester
CB603	Adhesive Bond Strength Tester
CB609	Axial Tensile Tester for Studs & Standoffs
CB612	Axial Tensile Tester for Studs & Standoffs
CB623	Axial Tensile Tester, Snap Stud
CB633	Adhesive Bond Strength Tester for Right-Angle and Standoff Cable-Tie Mounts (CB4062, CB9762, CB4064, and CB9764)
CB634	Proof Load Tensile Tester
CB637	Adhesive Bond Strength Tester for Right-Angle Nutplates
CB643	Adhesive Bond Strength Tester for CB4020, CB4021, CB4022, and CB4023
CB644	Proof Load Tensile Tester
CB651	Pneumatic External Grip Nutplate Push Off Tester
CB652	Pneumatic External Grip Nutplate Push Off Tester
CB653	Manual Nutplate Pushoff Tester
CB670	Adhesive Bond Strength Tester for CB9120 & CB9151 Cable-Tie Mounts
CB671	Adhesive Bond Strength Tester for Pinchmount Standoffs
CB672	Adhesive Bond Strength Tester for Pinchmount Nutplates
CB673	Axial Tensile Tester for Studs & Standoffs
CB674	Proof Load Tester for Brackets
CB675	Proof Load Tester for Brackets

A representative of Click Bond Sales will help you determine the right tool for your application.



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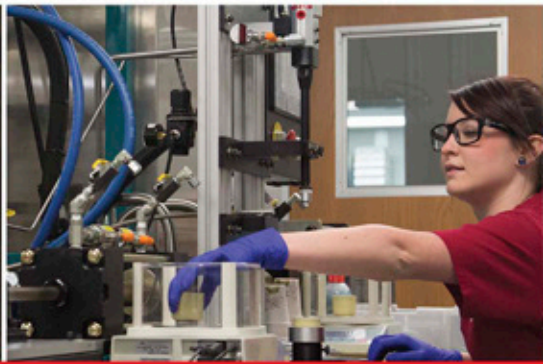
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