

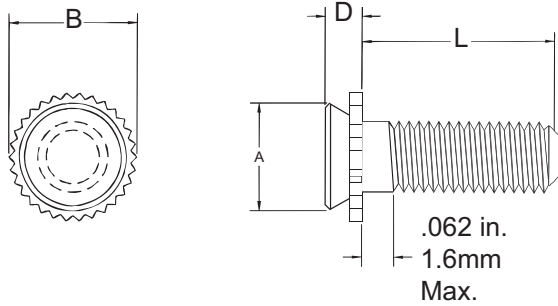


Self-Clinching Concealed-Head Studs

Series CFA & CFC



CFA & CFC concealed-head studs allow permanent mounting in thin metal sheets, using a hollow punch and solid anvil. The stud head is pressed permanently into a blind milled hole, with no marring of the exterior surface.



| Series | Material | Finish |
|--------|----------------------------|----------------------|
| CFA | 2024-T4 Aluminum | None |
| CFC | 300 Series Stainless Steel | Passivated ASTM A967 |

Thread: External 2A, ANSI B1.1 (6g ANSI/ASME B1.13M).*

Use in: CFA - HRB-50 or less.
CFC - HRB-70 or less.

Part Number Structure:

CFA-1-440-4



*See Note 3 on Page 6 for Gauging Spec.

Dimensions & Specifications

| INCH (in.) | Thread Size | Material | | Thread Code | L Length ±.015 (Length Code is in 16ths of an inch) | | | | | | Blind Mounting Hole Dia. +.003 -.000 | Min. Depth Of Blind Hole | D Max. | B ±.010 | A Max. | A Min. | Max. Hole in Attached Parts |
|------------|-------------|----------|-----------------|-------------|--|------|------|------|------|------|--|--------------------------|--------|---------|--------|--------|-----------------------------|
| | | Aluminum | Stainless Steel | | .250 | .375 | .500 | .625 | .750 | 1.00 | | | | | | | |
| | | Min. | Min. | | Min. | Min. | Min. | Min. | Min. | | | | | | | | |
| #4-40 | CFA-1 | CFC-1 | 440 | -4 | -6 | -8 | -10 | -12 | | .062 | .172 | .043 | .041 | .205 | .171 | .156 | .135 |
| | CFA-2 | CFC-2 | | -4 | -6 | -8 | -10 | -12 | | .093 | | | | | | | |
| #6-32 | CFA-1 | CFC-1 | 632 | -4 | -6 | -8 | -10 | -12 | -16 | .062 | .213 | .043 | .041 | .250 | .212 | .188 | .160 |
| | CFA-2 | CFC-2 | | -4 | -6 | -8 | -10 | -12 | -16 | .093 | | | | | | | |
| #8-32 | CFA-1 | CFC-1 | 832 | -4 | -6 | -8 | -10 | -12 | -16 | .062 | .290 | .043 | .041 | .328 | .289 | .219 | .185 |
| | CFA-2 | CFC-2 | | -4 | -6 | -8 | -10 | -12 | -16 | .093 | | | | | | | |
| #10-32 | CFA-1 | CFC-1 | 1032 | | -6 | -8 | -10 | -12 | -16 | .062 | .312 | .043 | .041 | .350 | .311 | .250 | .210 |
| | CFA-2 | CFC-2 | | | -6 | -8 | -10 | -12 | -16 | .093 | | | | | | | |

Dimensions & Specifications

| METRIC (mm) | Thread Size | Material | | Thread Code | L Length ±.4 (Length Code is in mm) | | | | | | Blind Mounting Hole Dia. +.08 -.00 | Min. Depth Of Blind Hole | D Max. | B ±.25 | A Max. | A Min. | Max. Hole in Attached Parts | |
|-------------|-------------|----------|-----------------|-------------|--|------|------|------|------|------|--|--------------------------|--------|--------|--------|--------|-----------------------------|-----|
| | | Aluminum | Stainless Steel | | 6 | 8 | 10 | 12 | 16 | 20 | | | | | | | | 25 |
| | | Min. | Min. | | Min. | Min. | Min. | Min. | Min. | Min. | | | | | | | | |
| M3x0.5 | CFA-1 | CFC-1 | M3 | -6 | -8 | -10 | -12 | -16 | -20 | 1.6 | 4.37 | 1.1 | 1.04 | 5.21 | 4.35 | 4 | 3.6 | |
| | CFA-2 | CFC-2 | | -6 | -8 | -10 | -12 | -16 | -20 | 2.4 | | | | | | | | |
| M4x0.7 | CFA-1 | CFC-1 | M4 | -6 | -8 | -10 | -12 | -16 | -20 | -25 | 1.6 | 7.37 | 1.1 | 1.04 | 8.33 | 7.35 | 5.6 | 4.6 |
| | CFA-2 | CFC-2 | | -6 | -8 | -10 | -12 | -16 | -20 | -25 | 2.4 | | | | | | | |
| M5x0.8 | CFA-1 | CFC-1 | M5 | | | -10 | -12 | -16 | -20 | -25 | 1.6 | 7.93 | 1.1 | 1.04 | 8.89 | 7.9 | 6.4 | 5.6 |
| | CFA-2 | CFC-2 | | | | -10 | -12 | -16 | -20 | -25 | 2.4 | | | | | | | |

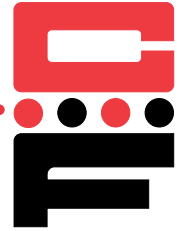
*Not stocked, available on special order.

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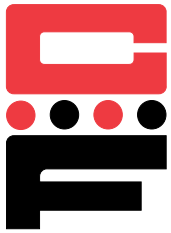


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Installation & Performance Data

| | Type | Thread Code | Tightening Torque Max. (in.-lbs.) | Sheet Material | | | |
|------------|-------|-------------|-----------------------------------|---------------------------|----------------|---------------------------|----------------|
| | | | | Cold-rolled Steel | | 5052-H34 Aluminum | |
| | | | | Installation Force (lbs.) | Pullout (lbs.) | Installation Force (lbs.) | Pullout (lbs.) |
| INCH (in.) | CFC-1 | 440 | 4.75 | 4000 | 300 | 2800 | 200 |
| | | 632 | 8.75 | 4500 | 350 | 3000 | 240 |
| | | 832 | 18 | 4800 | 400 | 4000 | 270 |
| | | 1032 | 32 | 5500 | 450 | 5000 | 290 |
| | CFC-2 | 440 | 4.75 | 4300 | 350 | 2900 | 220 |
| | | 632 | 8.75 | 5000 | 360 | 3200 | 240 |
| | | 832 | 18 | 5300 | 440 | 4000 | 300 |
| | | 1032 | 32 | 6000 | 600 | 5000 | 430 |
| | CFA-1 | 440 | 2.85 | N/A | N/A | 1400 | 130 |
| | | 632 | 5.4 | N/A | N/A | 1800 | 160 |
| | | 832 | 10.8 | N/A | N/A | 2800 | 180 |
| | | 1032 | 19.2 | N/A | N/A | 4000 | 210 |
| | CFA-2 | 440 | 2.85 | N/A | N/A | 1500 | 200 |
| | | 632 | 5.4 | N/A | N/A | 2500 | 260 |
| | | 832 | 10.8 | N/A | N/A | 3000 | 310 |
| | | 1032 | 19.2 | N/A | N/A | 3500 | 300 |

| | Type | Thread Code | Max. (N•m) | (kN) | (N) | (kN) | (N) |
|-------------|-------|-------------|------------|------|------|------|------|
| METRIC (mm) | CFC-1 | M3 | .5 | 8 | 1065 | 6.2 | 575 |
| | | M4 | 2 | 17.8 | 1200 | 12.5 | 800 |
| | | M5 | 3.6 | 22.2 | 1290 | 17.8 | 930 |
| | CFC-2 | M3 | .5 | 8.9 | 1065 | 6.7 | 890 |
| | | M4 | 2 | 14.7 | 1955 | 13.3 | 1375 |
| | | M5 | 3.6 | 17.8 | 3020 | 15.6 | 1600 |
| | CFA-1 | M3 | .3 | N/A | N/A | 6.2 | 555 |
| | | M4 | 1.2 | N/A | N/A | 12.5 | 645 |
| | | M5 | 2.16 | N/A | N/A | 17.8 | 755 |
| | CFA-2 | M3 | .3 | N/A | N/A | 6.7 | 845 |
| | | M4 | 1.2 | N/A | N/A | 13.3 | 1065 |
| | | M5 | 2.16 | N/A | N/A | 15.6 | 1330 |



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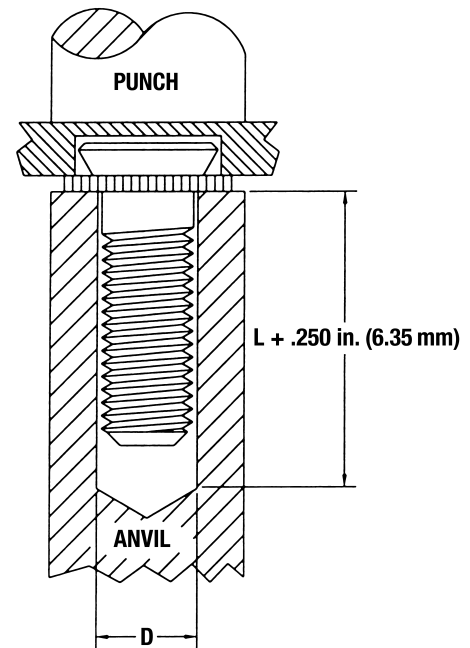
Typical Installation Method



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Installation Procedure

1. Mill a blind hole in material to specified depth.*
2. Place fastener into hole in anvil.
3. Place sheet material over head of fastener.
4. Apply a downward squeezing force with punch, pressing on sheet material until serrated collar of fastener is flush with surface.



*Depth of blind holes may be greater than minimum, if sheet thickness allows.

Anvil 'D' Diameter Dimensions for Concealed Head Studs

| INCH (in.) | Series | Thread Code | D Dia. (in.) |
|------------|------------|-------------|-----------------|
| | CFA CFC | | 440 |
| | | 632 | .152 |
| | | 832 | .179 |
| | | 1032 | .205 |

| METRIC (mm) | Series | Thread Code | D Dia. (mm) |
|-------------|------------|-------------|----------------|
| | CFA CFC | | M3 |
| | | M4 | 4.4 |
| | | M5 | 5.4 |