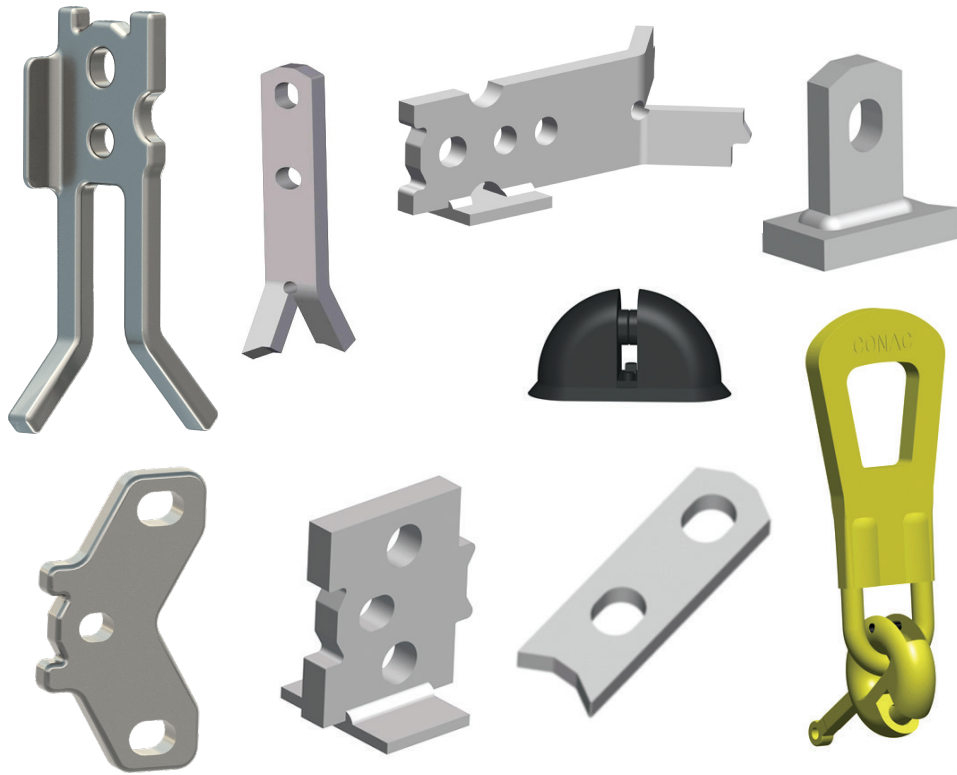


Flat Steel

Lifting System



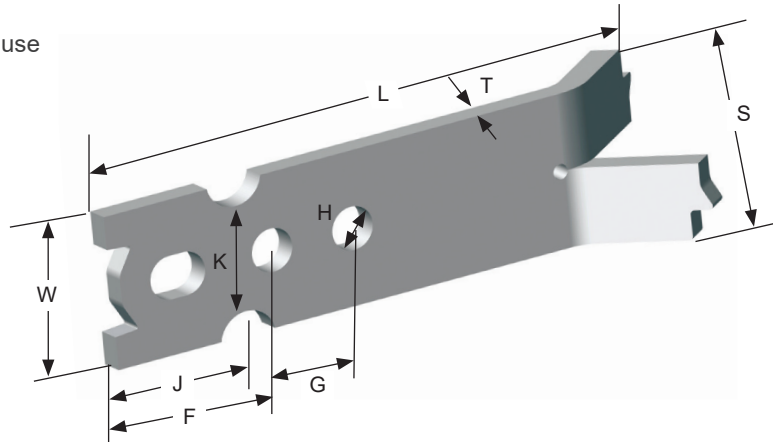
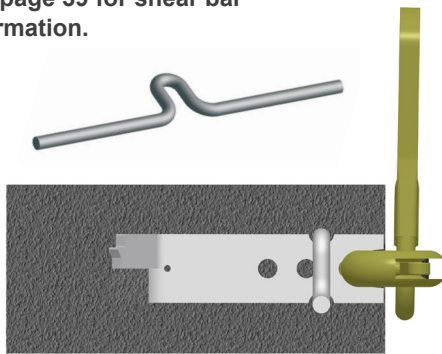
Flat Steel System



Erection Anchor

Designed to edge lift panel to vertical position with use of shear bar or shear plate.

See page 39 for shear bar information.



| TON | SYS CODE | ITEM CODE | BODY LENGTH (L) | BODY WIDTH (W) | BODY THICK. (T) | NOTCH LOCATION (J) | NECK WIDTH (K) | HOLE DIA. (H) | HOLE CENTERS (G) | HOLE LOCATION (F) | SPREAD (S) |
|-----|----------|--------------|-----------------|----------------|-----------------|--------------------|----------------|---------------|------------------|-------------------|------------|
| 2 | 2.5 | FEA02080 | 8" | 2" | 3/8" | 1-13/16" | 1-3/8" | 9/16" | 1-1/8" | 2-1/4" | 2-3/4" |
| 4 | 5 | FEA04105 | 10-1/2" | 2-1/2" | 5/8" | 2-1/2" | 1-13/16" | 3/4" | 1-1/4" | 3-3/16" | 3-3/8" |
| 8 | 10 | FEA08128 | 12-13/16" | 3-3/4" | 3/4" | 3-1/8" | 2-7/16" | 1" | 1-3/4" | 4" | 5" |
| 10 | 10 | FEA08128-10T | 12-13/16" | 3-3/4" | 3/4" | 3-1/8" | 2-7/16" | 1" | 1-3/4" | 4" | 5" |

| TON | SYSTEM CODE | ITEM CODE | PANEL THICKNESS | SWL SHEAR W/SHEAR BAR (LBS) | SWL TENSION W/O TENSION BAR (LBS) | SWL TENSION W/TENSION BAR (LBS) |
|----------------------------------|-------------|-----------|-----------------|-----------------------------|-----------------------------------|---------------------------------|
| 2-Ton Ring Clutch (2 Ton Anchor) | | | | | | |
| 2 | 2.5T | FEA02080 | 4" | 1950 | 3190 | 4000 |
| | | | 5" | 2105 | 3885 | |
| | | | 6" | 2535 | 4000 | |
| | | | 7" | 2885 | 4000 | |
| | | | 8" | 3145 | 4000 | |
| | | | 9" | 3445 | 4000 | |
| | | | 10" | 3625 | 4000 | |
| | | | 11" | 3885 | 4000 | |
| 4-Ton Ring Clutch (4 Ton Anchor) | | | | | | |
| 4 | 5T | FEA04105 | 6" | 3000 | 5185 | 8000 |
| | | | 7" | 3155 | 6015 | |
| | | | 8" | 3445 | 6900 | |
| | | | 9" | 3635 | 7785 | |
| | | | 10" | 3845 | 8000 | |
| | | | 11" | 3945 | 8000 | |
| | | | 12" | 4000 | 8000 | |
| 8-Ton Ring Clutch (8 Ton Anchor) | | | | | | |
| 8 | 10T | FEA08128 | 8" | 4000 | 7695 | 16000 |
| | | | 9" | 4165 | 8625 | |
| | | | 10" | 4265 | 9565 | |
| | | | 11" | 4485 | 10680 | |
| | | | 12" | 4535 | 11660 | |

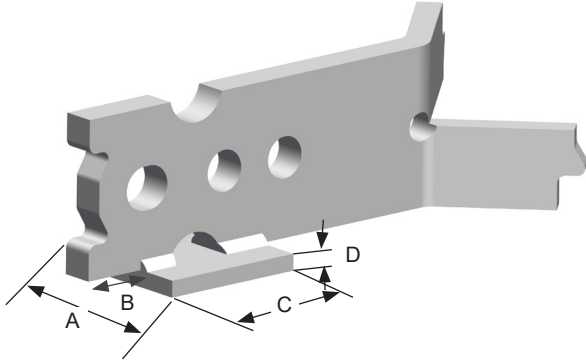
Safe working loads based on 4:1 Safety Factor in 3,500 psi normal weight concrete. See page 26 for Tension Vee Bar information.

Flat Steel System



Erection Anchor with Shear Plate

Welded shear plate eliminates need for shear bars.



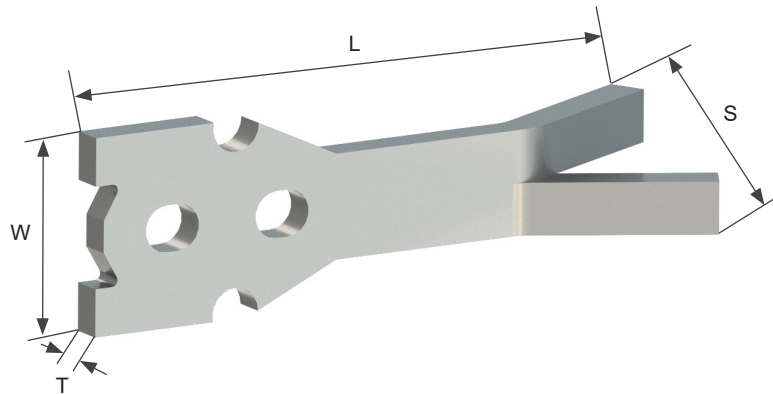
| TON | SYS CODE | ITEM CODE | PLATE WIDTH (A) | PLATE POSITION (B) | PLATE LENGTH (C) | PLATE THICK. (D) |
|-----|----------|---------------|-----------------|--------------------|------------------|------------------|
| 2 | 2.5 | FEA02080S | 2-1/2" | 3/4" | 3" | 1/4" |
| 4 | 5 | FEA04105S | 2-1/2" | 1-1/4" | 3" | 3/8" |
| 8 | 10 | FEA08128S | 3" | 1-5/8" | 3-1/2" | 3/8" |
| 10 | 10 | FEA08128S-10T | 3" | 1-5/8" | 3-1/2" | 3/8" |

| TON | SYSTEM CODE | ITEM CODE | PANEL THICKNESS | SWL SHEAR W/SHEAR PLATE (LBS) | SWL TENSION W/O TENSION BAR (LBS) | SWL TENSION W/TENSION BAR (LBS) |
|----------------------------------|-------------|-----------|-----------------|-------------------------------|-----------------------------------|---------------------------------|
| 2-Ton Ring Clutch (2 Ton Anchor) | | | | | | |
| 2 | 2.5T | FEA02080S | 4" | 1950 | 3190 | 4000 |
| | | | 5" | 2100 | 3885 | |
| | | | 6" | 2500 | 4000 | |
| | | | 7" | 2870 | 4000 | |
| | | | 8" | 3160 | 4000 | |
| | | | 9" | 3420 | 4000 | |
| | | | 10" | 3640 | 4000 | |
| | | | 11" | 3840 | 4000 | |
| 4-Ton Ring Clutch (4 Ton Anchor) | | | | | | |
| 4 | 5T | FEA04105S | 4" | 1800 | 3400 | 8000 |
| | | | 5" | 2660 | 4730 | |
| | | | 6" | 2860 | 5185 | |
| | | | 7" | 3170 | 6015 | |
| | | | 8" | 3430 | 6900 | |
| | | | 9" | 3650 | 7785 | |
| | | | 10" | 3860 | 8000 | |
| | | | 11" | 3930 | 8000 | |
| 8-Ton Ring Clutch (8 Ton Anchor) | | | | | | |
| 8 | 10T | FEA08128S | 7" | 4010 | 7100 | 16000 |
| | | | 8" | 4010 | 7695 | |
| | | | 9" | 4120 | 8625 | |
| | | | 10" | 4280 | 9565 | |
| | | | 11" | 4420 | 10680 | |
| | | | 12" | 4550 | 11660 | |

Safe working loads based on approximate 4:1 Safety Factor in 3,500 psi normal weight concrete. See page 26 for Tension Vee Bar information.

Erection Split Tail Anchor

CONAC Erection Split Tail Anchor is ideal for use in thick precast wall panels and edge lifting applications. The protrusions on the anchor head prevent lifting device interaction with the concrete that could cause spalling, and enables a wider shear cone to achieve higher shear loads.

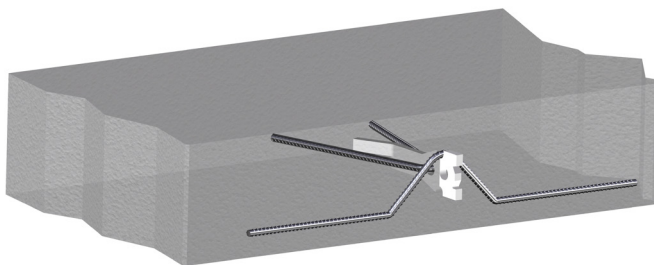


| TON | SYS CODE | ITEM CODE | BODY LENGTH (L) | BODY WIDTH (W) | BODY THICK. (T) | HOLE DIA. (H) | SPREAD (S) | SWL (LBS) | UML |
|------|----------|-----------|-----------------|----------------|-----------------|---------------|------------|--------------|---------------|
| 12.5 | 22 | FEA-S1720 | 19-5/8" | 5-7/8" | 7/8" | 1-3/8" | 3-1/8" | 25000 | 100000 |
| 17 | 22 | FEA-S1720 | 19-5/8" | 5-7/8" | 1" | 1-3/8" | 3-1/8" | 34000 | 158000 |
| 21 | 22 | FEA-S2120 | 19-5/8" | 5-7/8" | 1-1/8" | 1-3/8" | 3-1/8" | 42000 | 168000 |

UML=Ultimate Mechanical Load
Safe working loads based on approximate 4:1 Safety Factor in 3,500 psi normal weight concrete.

| TON | SYS CODE | ITEM CODE | MIN. EDGE DISTANCE | MIN. ANCHOR SPACING | PANEL THICKNESS | SWL SHEAR W/SHEAR BAR (LBS) | SWL TENSION W/TENSION BAR (LBS) |
|------|----------|-----------|--------------------|---------------------|-----------------|-----------------------------|---------------------------------|
| 12.5 | 22 | FEA-S1720 | 36" | 72" | 10" | 10538 | 25000 |
| 17 | 22 | FEA-S1720 | 36" | 72" | 12" | 14332 | 34000 |
| 21 | 22 | FEA-S2120 | 36" | 72" | 14" | 18547 | 42000 |

UML=Ultimate Mechanical Load
Safe working loads based on approximate 4:1 Safety Factor in 3,500 psi normal weight concrete.



| TON | SHEAR BAR | |
|------|------------------|-------------------------------|
| | REBAR SIZE (DIA) | REBAR LENGTH (BEFORE BENDING) |
| 12.5 | #8 | 72" |
| 17 | #8 | 72" |
| 21 | #8 | 72" |



Rebar V's are required to develop SWL.

| TENSION VEES | REBAR SIZE | MIN. BEND DIAMETER (D) | REQUIRED TO DEVELOP REINFORCED ALLOWABLE TENSION CAPACITY | | | | | | |
|-------------------------|------------|------------------------|---|-------|-------|-------|-------|-------|-------|
| | | | Concrete Strength [psi] | | | | | | |
| Nominal System Capacity | | | 2,200 | 2,500 | 3,000 | 3,500 | 4,000 | 4,500 | 5,000 |
| | | | Length of Rebar Before Bending [in] | | | | | | |
| 12.5 Ton | #7 | 5-1/4" | 110 | 104 | 95 | 89 | 83 | 79 | 75 |
| 17 Ton | #8 | 6" | 130 | 122 | 112 | 105 | 98 | 93 | 89 |
| 21 Ton | #9 | 9-1/2" | 143 | 134 | 123 | 115 | 108 | 102 | 97 |

Based on ACI 318-14 requirements.
For single bar application.
Multiply chart values by 1.3 for lightweight concrete.
Multiply chart values by 1.2 for epoxy coated bars.

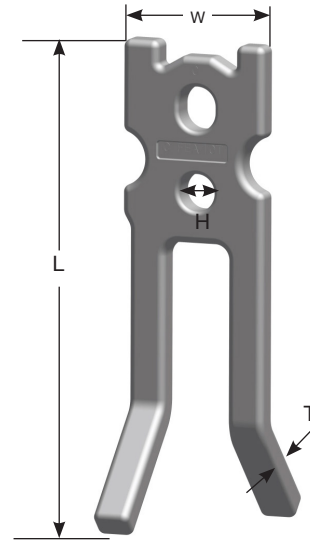
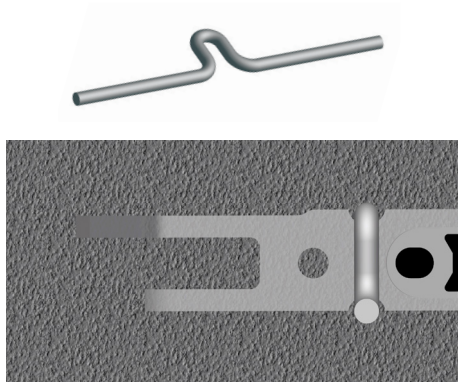
Flat Steel System



Forged Erection Anchor

Designed to edge lift panel to vertical position with use of shear bar or shear plate.

See page 39 for shear bar information.



| TON | SYS CODE | RING CLUTCH | ITEM CODE | BODY LENGTH (L) | BODY WIDTH (W) | BODY THICK. (T) | HOLE DIA. (H) | SPREAD (S) | SWLTENSION (LBS) | UML (LBS) |
|-----|----------|-------------|-----------|-----------------|----------------|-----------------|---------------|------------|------------------|-----------|
| 3 | 2.5T | 2-3 T | CFEA3T | 8" | 2" | 3/8" | 1/2" | 3-1/4" | 6,000 | 24,000 |
| 6 | 5.0T | 4-6 T | CFEA6T | 10-1/2" | 2-3/4" | 5/8" | 3/4" | 4-3/16" | 12,000 | 48,000 |
| 11 | 10T | 11 T | CFEA11T* | 12-13/16" | 4" | 3/4" | 1-1/8" | 6" | 24,000 | 96,000 |

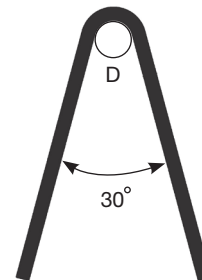
Safe working loads based on approximate 4:1 Safety Factor in 3,500 psi normal weight concrete.

UML=Ultimate Mechanical Load

* Note: Using this anchor to its 11 ton capacity requires use of CONAC FRC11B Ring Clutch.



Rebar V's are required to develop SWL.



| TENSION VEES | | REQUIRED TO DEVELOP REINFORCED ALLOWABLE TENSION CAPACITY | | | | | | | |
|-------------------------|------------|---|-------------------------------------|-------|-------|-------|-------|-------|----|
| Nominal System Capacity | Rebar Size | Min. Bend Diameter (D) | Concrete Strength [psi] | | | | | | |
| | | | 2,200 | 2,500 | 3,000 | 3,500 | 4,000 | 4,500 | |
| | | | Length of Rebar Before Bending [in] | | | | | | |
| 3 Ton | #4 | 3" | 37 | 35 | 32 | 30 | 28 | 27 | 25 |
| 6 Ton | #5 | 3-3/4" | 59 | 56 | 51 | 48 | 45 | 43 | 41 |
| 11 Ton | #7 | 5-1/4" | 97 | 91 | 84 | 78 | 73 | 69 | 66 |
| 12 Ton | #7 | 5-1/4" | 106 | 100 | 91 | 85 | 80 | 76 | 72 |

Based on ACI 318-14 requirements.

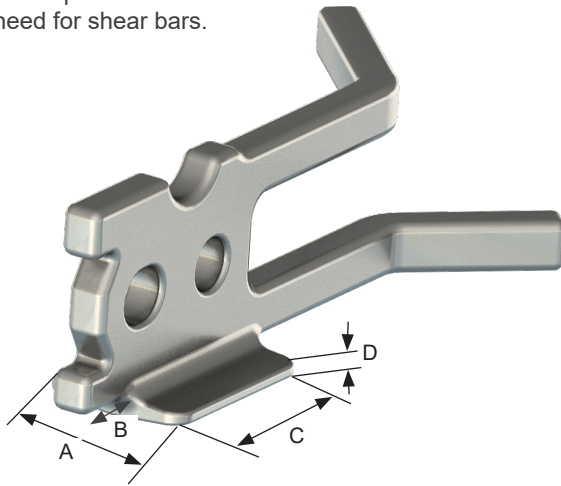
For single bar application.

Multiply chart values by 1.3 for lightweight concrete.

Multiply chart values by 1.2 for epoxy coated bars.

Forged Erection Anchor With Shear Plate

Shear plate eliminates need for shear bars.



| TON | SYS CODE | ITEM CODE | PLATE WIDTH (A) | PLATE POSITION (B) | PLATE LENGTH (C) | PLATE THICK. (D) |
|-----|----------|-----------|-----------------|--------------------|------------------|------------------|
| 3 | 2.5 | CFEA3TS | 2-1/2" | 3/4" | 3-1/2" | 5/16" |
| 6 | 5 | CFEA6TS | 2-1/2" | 1-1/4" | 3" | 3/8" |
| 11 | 10 | CFEA11TS | 3" | 1-5/8" | 4" | 3/8" |

| TON | SYSTEM CODE | ITEM CODE | PANEL THICKNESS | SWL SHEAR W/SHEAR PLATE (LBS) | SWL TENSION W/O TENSION BAR (LBS) | SWL TENSION W/TENSION BAR (LBS) |
|---|-------------|-----------|-----------------|-------------------------------|-----------------------------------|---------------------------------|
| 2-3 Ton Ring Clutch (3 Ton Anchor) | | | | | | |
| 3 | 2.5T | CFEA3TS | 4" | 1980 | 3190 | 6000 |
| | | | 5" | 2110 | 3885 | |
| | | | 6" | 2360 | 4000 | |
| | | | 7" | 2610 | 4380 | |
| | | | 8" | 2880 | 5010 | |
| | | | 9" | 3160 | 5640 | |
| | | | 10" | 3440 | 6000 | |
| | | | 11" | 3720 | 6000 | |
| 4-6 Ton Ring Clutch (6 Ton Anchor) | | | | | | |
| 6 | 5.0T | CFEA6TS | 5-1/2" | 2840 | 4970 | 12000 |
| | | | 6" | 2980 | 5185 | |
| | | | 7" | 3260 | 6015 | |
| | | | 8" | 3550 | 6900 | |
| | | | 9" | 3850 | 7785 | |
| | | | 10" | 4160 | 8590 | |
| | | | 11" | 4480 | 9450 | |
| | | | 12" | 4800 | 10310 | |
| 11-Ton Ring Clutch (11 Ton Anchor) | | | | | | |
| 11 | 10T | CFEA11TS | 8" | 3800 | 7695 | 24000 |
| | | | 9" | 4100 | 8625 | |
| | | | 10" | 4410 | 9565 | |
| | | | 11" | 4730 | 10680 | |
| | | | 12" | 5060 | 11660 | |

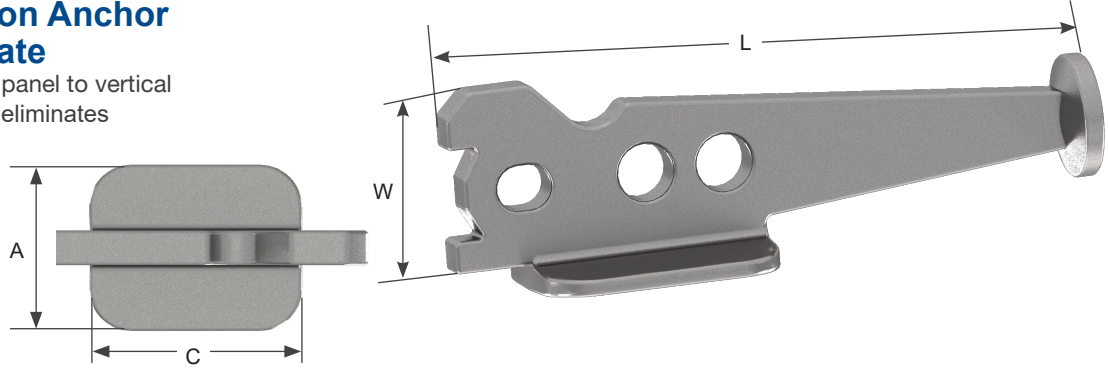
Safe working loads based on approximate 4:1 Safety Factor in 3,500 psi normal weight concrete.

Flat Steel System



Forged Erection Anchor With Shear Plate

Designed to edge lift panel to vertical position. Shear plate eliminates need for shear bars.



| TON | SYS CODE | RING CLUTCH | ITEM CODE | BODY LENGTH (L) | BODY WIDTH (W) | BODY THICK. (T) | PLATE WIDTH (A) | PLATE LENGTH (C) | SWL TENSION (LBS) | UML (LBS) |
|-----|----------|-------------|-----------|-----------------|----------------|-----------------|-----------------|------------------|-------------------|-----------|
| 3 | 2.5T | 2-3 T | CNFEA3TS | 8" | 2-3/8" | 3/8" | 2-1/2" | 3-1/2" | 6000 | 24000 |
| 6 | 5.0T | 4-6 T | CNFEA6TS | 10-1/2" | 2-7/8" | 5/8" | 3" | 4" | 12000 | 48000 |
| 12 | 10T | 12 T | CNFEA12TS | 12-13/16" | 4-5/16" | 3/4" | 3-1/4" | 4" | 24000 | 96000 |

UML=Ultimate Mechanical Load
 Safe working loads based on approximate 4:1 Safety Factor in 3,500 psi normal weight concrete.

| TON | SYSTEM CODE | ITEM CODE | PANEL THICKNESS | SWL SHEAR W/SHEAR PLATE (LBS) | SWL TENSION W/O TENSION BAR (LBS) | SWL TENSION W/TENSION BAR (LBS) |
|----------------------------|-------------|-----------|-----------------|-------------------------------|-----------------------------------|---------------------------------|
| 2-3 Ton Ring Clutch | | | | | | |
| 3 | 2.5T | CNFEA3TS | 4" | 1800 | 6000 | 6000 |
| | | | 5" | 2300 | | |
| | | | 6" | 2800 | | |
| | | | 7" | 3400 | | |
| | | | 8" | 4000 | | |
| | | | 9" | 4400 | | |
| | | | 10" | 4800 | | |
| | | | 11" | 5200 | | |
| 12" | 5700 | | | | | |
| 4-6 Ton Ring Clutch | | | | | | |
| 6 | 5.0T | CNFEA6TS | 5-1/2" | 3100 | 10000 | 12000 |
| | | | 6" | 3250 | | |
| | | | 7" | 3700 | | |
| | | | 8" | 4040 | | |
| | | | 9" | 4600 | | |
| | | | 10" | 5000 | | |
| | | | 11" | 5500 | | |
| | | | 12" | 6100 | | |
| 12 Ton Ring Clutch | | | | | | |
| 12 | 10T | CNFEA12TS | 7-1/2" | 4600 | 17890 | 24000 |
| | | | 8" | 4800 | | |
| | | | 9" | 5450 | | |
| | | | 10" | 6100 | | |
| | | | 11" | 6800 | | |
| | | | 12" | 7600 | | |

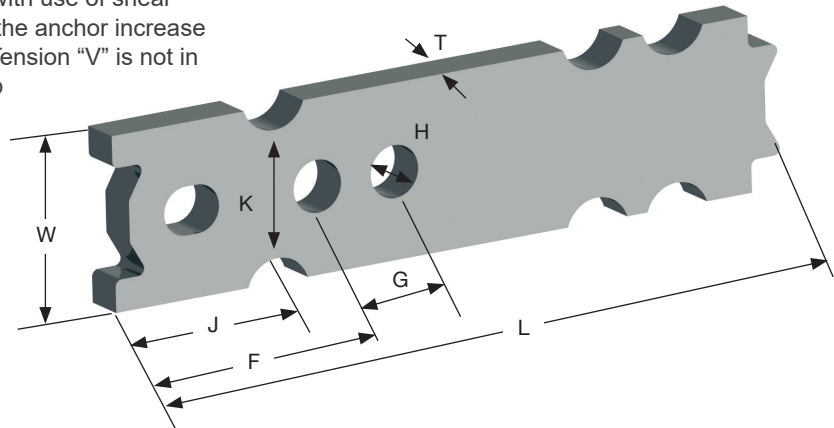
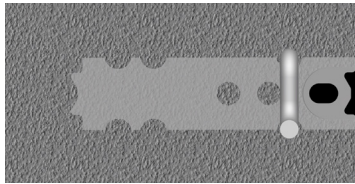
Safe working loads based on approximate 4:1 Safety Factor in 3,500 psi normal weight concrete.

Flat Steel System

Tech Erection Anchor

Designed to edge lift panel to vertical position with use of shear bar or shear plate. Indentations in the sides of the anchor increase bond to develop additional tension load when Tension "V" is not in use. Tension "V"s are still necessary to develop the full mechanical capacity of the anchor.

See page 39 for shear bar information.



| TON | SYS CODE | ITEM CODE | BODY LENGTH (L) | BODY WIDTH (W) | BODY THICK. (T) | NOTCH LOCATION (J) | NECK WIDTH (K) | HOLE LOCA. (F) | HOLE CENTER (G) | HOLE DIA. (H) | SWL TENSION (LBS) | UML TENSION (LBS) |
|-----|----------|------------|-----------------|----------------|-----------------|--------------------|----------------|----------------|-----------------|---------------|-------------------|-------------------|
| 2 | 2.5 | FEA-T02080 | 8" | 2" | 3/8" | 1-13/16" | 1-3/8" | 2-1/4" | 1-1/8" | 9/16" | 4,000 | 16,000 |
| 4 | 5 | FEA-T04105 | 10-1/2" | 2-1/2" | 5/8" | 2-1/2" | 1-13/16" | 3-3/16" | 1-1/4" | 3/4" | 8,000 | 32,000 |
| 8 | 10 | FEA-T08128 | 13-3/8" | 3-3/4" | 3/4" | 3-3/16" | 2-9/16" | 4" | 1-3/4" | 1" | 16,000 | 64,000 |

Safe working loads based on approximate 4:1 Safety Factor in 3,500 psi normal weight concrete.
UML= Ultimate Mechanical Load

| TON | SYSTEM CODE | ITEM CODE | PANEL THICKNESS | SWL SHEAR W/SHEAR BAR (LBS) | SWL TENSION W/O TENSION BAR (LBS) | SWL TENSION W/TENSION BAR (LBS) |
|---|-------------|------------|-----------------|-----------------------------|-----------------------------------|---------------------------------|
| 2-Ton Ring Clutch (2 Ton Anchor) | | | | | | |
| 2 | 2.5T | FEA-T02080 | 4" | 1950 | 3190 | 4000 |
| | | | 5" | 2105 | 3885 | |
| | | | 6" | 2535 | 4000 | |
| | | | 7" | 2885 | 4000 | |
| | | | 8" | 3145 | 4000 | |
| | | | 9" | 3445 | 4000 | |
| | | | 10" | 3625 | 4000 | |
| | | | 11" | 3885 | 4000 | |
| 4-Ton Ring Clutch (4 Ton Anchor) | | | | | | |
| 4 | 5T | FEA-T04105 | 6" | 3000 | 5185 | 8000 |
| | | | 7" | 3155 | 6015 | |
| | | | 8" | 3445 | 6900 | |
| | | | 9" | 3635 | 7785 | |
| | | | 10" | 3845 | 8000 | |
| | | | 11" | 3945 | 8000 | |
| | | | 12" | 4000 | 8000 | |
| 8-Ton Ring Clutch (8 Ton Anchor) | | | | | | |
| 8 | 10T | FEA-T08128 | 8" | 4000 | 7695 | 16000 |
| | | | 9" | 4165 | 8625 | |
| | | | 10" | 4265 | 9565 | |
| | | | 11" | 4485 | 10680 | |
| | | | 12" | 4535 | 11660 | |

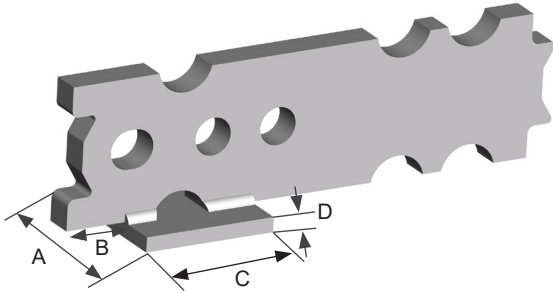
Safe working loads based on approximate 4:1 Safety Factor in 3,500 psi normal weight concrete.
See page 26 for Tension Vee Bar information.

Flat Steel System



Tech Erection Anchor with Shear Plate

Welded shear plate eliminates need for shear bars.



| TON | SYS CODE | ITEM CODE | PLATE WIDTH (A) | PLATE POSITION (B) | PLATE LENGTH (C) | PLATE THICK. (D) |
|-----|----------|-------------|-----------------|--------------------|------------------|------------------|
| 2 | 2.5 | FEA-T02080S | 2-1/2" | 3/4" | 3" | 1/4" |
| 4 | 5 | FEA-T04105S | 2-1/2" | 1-1/4" | 3" | 3/8" |
| 8 | 10 | FEA-T08128S | 3" | 1-5/8" | 3-1/2" | 3/8" |

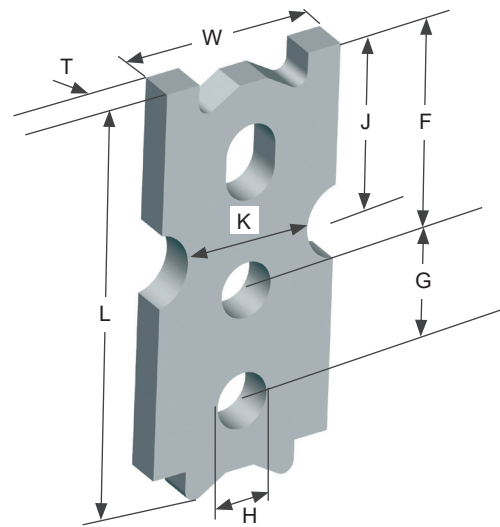
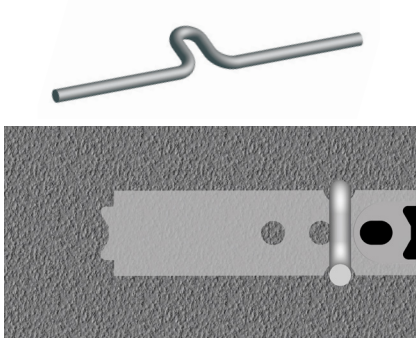
| TON | SYSTEM CODE | ITEM CODE | PANEL THICKNESS | SWL SHEAR W/SHEAR PLATE (LBS) | SWL TENSION W/O TENSION BAR (LBS) | SWL TENSION W/TENSION BAR (LBS) |
|---|-------------|-------------|-----------------|-------------------------------|-----------------------------------|---------------------------------|
| 2-Ton Ring Clutch (2 Ton Anchor) | | | | | | |
| 2 | 2.5T | FEA-T02080S | 4" | 1950 | 3190 | 4000 |
| | | | 5" | 2100 | 3885 | |
| | | | 6" | 2500 | 4000 | |
| | | | 7" | 2870 | 4000 | |
| | | | 8" | 3160 | 4000 | |
| | | | 9" | 3420 | 4000 | |
| | | | 10" | 3640 | 4000 | |
| | | | 11" | 3840 | 4000 | |
| 4-Ton Ring Clutch (4 Ton Anchor) | | | | | | |
| 4 | 5T | FEA-T04105S | 4" | 1800 | 3400 | 8000 |
| | | | 5" | 2660 | 4730 | |
| | | | 6" | 2860 | 5185 | |
| | | | 7" | 3170 | 6015 | |
| | | | 8" | 3430 | 6900 | |
| | | | 9" | 3650 | 7785 | |
| | | | 10" | 3860 | 8000 | |
| | | | 11" | 3930 | 8000 | |
| 8-Ton Ring Clutch (8 Ton Anchor) | | | | | | |
| 8 | 10T | FEA-T08128S | 7" | 4010 | 7100 | 16000 |
| | | | 8" | 4010 | 7695 | |
| | | | 9" | 4120 | 8625 | |
| | | | 10" | 4280 | 9565 | |
| | | | 11" | 4420 | 10680 | |
| | | | 12" | 4550 | 11660 | |

Safe working loads based on approximate 4:1 Safety Factor in 3,500 psi normal weight concrete. See page 26 for Tension Vee Bar information.

Erection Head Anchor

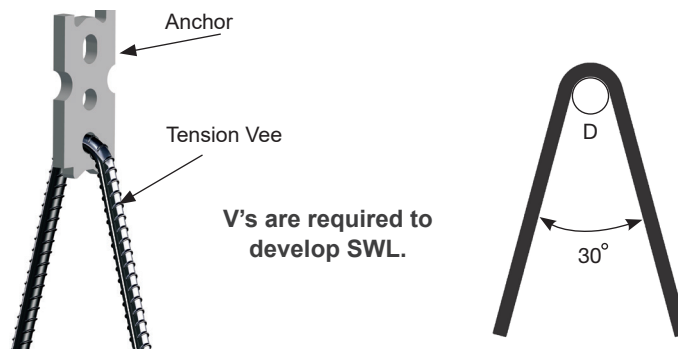
Ideal for lifting in shear position, such as a tilt table or A-frame when shear plate or shear bar is used.
Rebar V's are required to develop SWL.

See page 39 for shear bar information.



| TON | SYS CODE | ITEM CODE | BODY LENGTH (L) | BODY WIDTH (W) | BODY THICK. (T) | NOTCH LOCATION (J) | NECK WIDTH (K) | HOLE LOCA. (F) | HOLE CENTER (G) | HOLE DIA. (H) | SWL TENSION (LBS) | UML (LBS) |
|-----|----------|-----------|-----------------|----------------|-----------------|--------------------|----------------|----------------|-----------------|---------------|-------------------|-----------|
| 2 | 2.5 | FEH02043 | 4-1/4" | 2" | 3/8" | 1-13/16" | 1-3/8" | 2-1/4" | 1-1/8" | 9/16" | 4,000 | 16000 |
| 2 | 2.5 | FEH02080 | 7-7/8" | 2" | 3/8" | 1-13/16" | 1-3/8" | 2-1/4" | 1-1/8" | 9/16" | 4,000 | 16000 |
| 4 | 5 | FEH04075 | 7-7/16" | 2-1/2" | 5/8" | 2-1/2" | 1-13/16" | 3-3/16" | 1-1/4" | 3/4" | 8,000 | 32000 |
| 4 | 5 | FEH04105 | 10-1/2" | 2-1/2" | 5/8" | 2-1/2" | 1-13/16" | 3-3/16" | 1-1/4" | 3/4" | 8,000 | 32000 |
| 8 | 10 | FEH08133 | 13-1/4" | 3-3/4" | 3/4" | 3-1/8" | 2-7/16" | 4" | 1-3/4" | 1" | 16,000 | 64000 |

Safe working loads based on approximate 4:1 Safety Factor in 3,500 psi normal weight concrete.
 UML= Ultimate Mechanical Load



| TENSION VEES | | REQUIRED TO DEVELOP REINFORCED ALLOWABLE TENSION CAPACITY | | | | | | | |
|-------------------------|------------|---|-------------------------------------|-------|-------|-------|-------|-------|-------|
| Nominal System Capacity | Rebar Size | Min. Bend Diameter (D) | Concrete Strength [psi] | | | | | | |
| | | | 2,200 | 2,500 | 3,000 | 3,500 | 4,000 | 4,500 | 5,000 |
| | | | Length of Rebar Before Bending [in] | | | | | | |
| 2 Ton | #3 | 2-1/4" | 33 | 32 | 29 | 27 | 25 | 24 | 24 |
| 4 Ton | #4 | 3" | 49 | 46 | 43 | 40 | 37 | 35 | 34 |
| 8 Ton | #6 | 4-1/2" | 67 | 63 | 58 | 54 | 51 | 48 | 46 |
| 10 Ton | #7 | 5-1/4" | 88 | 83 | 76 | 71 | 67 | 63 | 60 |

Based on ACI 318-14 requirements.
 For single bar application.
 Multiply chart values by 1.3 for lightweight concrete.
 Multiply chart values by 1.2 for epoxy coated bars.

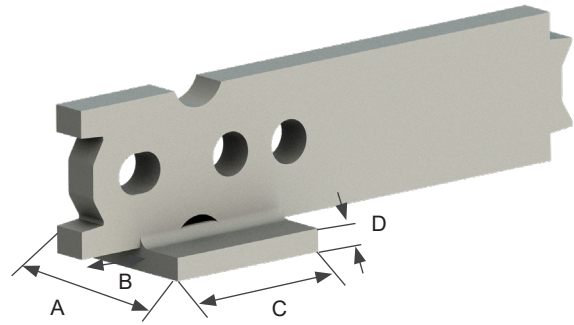
Flat Steel System



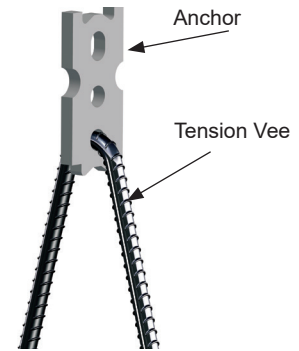
Erection Head Anchor with Shear Plate

Welded shear plate eliminates need for shear bars.

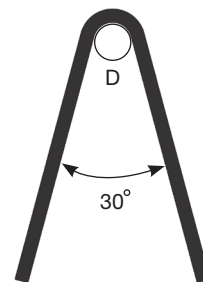
| TON | SYS CODE | ITEM CODE | PLATE WIDTH (A) | PLATE POSITION (B) | PLATE LENGTH (C) | PLATE THICK. (D) |
|-----|----------|-----------|-----------------|--------------------|------------------|------------------|
| 2 | 2.5 | FEH02043S | 2-1/2" | 3/4" | 3" | 1/4" |
| 2 | 2.5 | FEH02080S | 2-1/2" | 3/4" | 3" | 1/4" |
| 4 | 5 | FEH04075S | 2-1/2" | 1-1/4" | 3" | 3/8" |
| 4 | 5 | FEH04105S | 2-1/2" | 1-1/4" | 3" | 3/8" |
| 8 | 10 | FEH08133S | 3" | 1-5/8" | 3-1/2" | 3/8" |



| TON | SYSTEM CODE | ITEM CODE | PANEL THICKNESS | SWL SHEAR W/SHEAR PLATE (LBS) | SWL TENSION W/TENSION BAR (LBS) |
|---|-------------|-----------|---|-------------------------------|---------------------------------|
| 2-Ton Ring Clutch (2 Ton Anchor) | | | | | |
| 2 | 2.5 | FEH02043S | 4" | 1235 | 4000 |
| | | | 5" | 1525 | |
| | | | 6" | 1750 | |
| | | | 7" | 1900 | |
| | | | 8" | 2075 | |
| 2 | 2.5T | FEH02080S | 4" | 1950 | 4000 |
| | | | 5" | 2100 | |
| | | | 6" | 2500 | |
| | | | 7" | 2870 | |
| 4 | 5T | FEH04075S | 4-Ton Ring Clutch (4 Ton Anchor) | | |
| | | | 5-1/2" | 2025 | 8000 |
| | | | 6" | 2250 | |
| | | | 7" | 2600 | |
| | | | 8" | 3000 | |
| | | | 9" | 3375 | |
| 4 | 5T | FEH04105S | 5" | 2660 | |
| | | | 6" | 2920 | |
| | | | 7" | 3170 | |
| | | | 8" | 3430 | |
| | | | 9" | 3650 | |
| | | | 10" | 3860 | |
| | | | 11" | 3930 | |
| 8 | 10T | FEH08133S | 8-Ton Ring Clutch (8 Ton Anchor) | | |
| | | | 7" | 4010 | 16000 |
| | | | 8" | 4010 | |
| | | | 9" | 4120 | |
| | | | 10" | 4280 | |
| | | | 11" | 4420 | |
| 12" | 4550 | | | | |



V's are required to develop SWL.

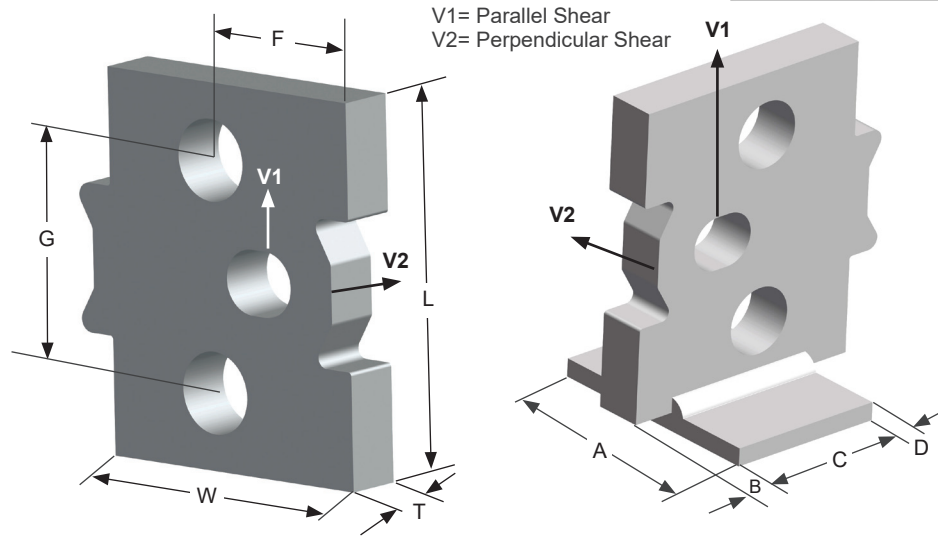


Safe working loads based on approximate 4:1 Safety Factor in 3,500 psi normal weight concrete. See page 26 for Tension Vee Bar information.

Flat Steel System

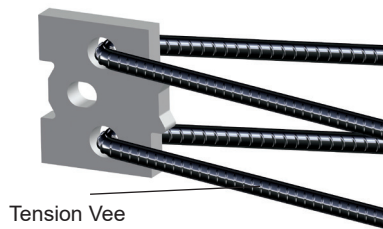
Insulated Panel Erection Anchor

Used for insulated/sandwich wall panels. Delivers load distribution to both wythes. Shear plate maximizes shear loads. Rebar Vees required to develop SWL.



| TON | ITEM CODE | ANCH. LENG. (L) | ANCH. WIDTH (W) | THICK. (T) | HOLE LOCAT. (F) | HOLE CENT. (G) | PLATE WIDTH (A) | PLATE POS. (B) | PLATE LENG. (C) | PLATE THICK. (D) | UML TENS. (LBS) | SWL TENS. (LBS) | V1 SHEAR (LBS) | V2 SHEAR (LBS) |
|----------------------------------|-----------|-----------------|-----------------|------------|-----------------|----------------|-----------------|----------------|-----------------|------------------|-----------------|-----------------|----------------|----------------|
| FOR 6" THICK PANEL 2+2+2 | | | | | | | | | | | | | | |
| 4 | FIN043X4 | 4" | 3-3/8" | 5/8" | 2-1/4" | 2-3/8" | n/a | n/a | n/a | n/a | 32000 | 6400 | 3640 | 3700 |
| 4 | FIN043X4S | 4" | 3-3/8" | 5/8" | 2-1/4" | 2-3/8" | 3" | 1/2" | 2" | 1/4" | 32000 | 6400 | 3605 | 3700 |
| FOR 8" THICK PANEL 3+2+3 | | | | | | | | | | | | | | |
| 4 | FIN 043X6 | 6" | 3-1/4" | 5/8" | 1-7/8" | 4-3/8" | n/a | n/a | n/a | n/a | 32000 | 8000 | 4600 | 8000 |
| 4 | FIN043X6S | 6" | 3-1/4" | 5/8" | 1-7/8" | 4-3/8" | 3" | 5/8" | 2" | 1/4" | 32000 | 8000 | 4875 | 8000 |
| 8 | FIN084X6 | 6" | 4-3/4" | 3/4" | 3-3/8" | 4-3/8" | n/a | n/a | n/a | n/a | 64000 | 16000 | 4310 | 9500 |
| 8 | FIN084X6S | 6" | 4-3/4" | 3/4" | 3-3/8" | 4-3/8" | 3" | 3/4" | 3-1/2" | 3/8" | 64000 | 16000 | 4409 | 9500 |
| FOR 8" THICK PANEL 4+2+2 | | | | | | | | | | | | | | |
| 4 | FIN043X6 | 6" | 3-1/4" | 5/8" | 1-7/8" | 4-3/8" | n/a | n/a | n/a | n/a | 32000 | 8000 | 5050 | 8000 |
| 4 | FIN043X6S | 6" | 3-1/4" | 5/8" | 1-7/8" | 4-3/8" | 3" | 5/8" | 2" | 1/4" | 32000 | 8000 | 5350 | 8000 |
| 8 | FIN084X6 | 6" | 4-3/4" | 3/4" | 3-3/8" | 4-3/8" | n/a | n/a | n/a | n/a | 64000 | 16000 | 5110 | 10500 |
| 8 | FIN084X6S | 6" | 4-3/4" | 3/4" | 3-3/8" | 4-3/8" | 3" | 3/4" | 3-1/2" | 3/8" | 64000 | 16000 | 5427 | 10500 |
| FOR 9" THICK PANEL 3+3+3 | | | | | | | | | | | | | | |
| 10 | FIN084X7 | 7" | 4-3/4" | 3/4" | 3-3/8" | 5" | n/a | n/a | n/a | n/a | 80000 | 20000 | 5210 | 10900 |
| 10 | FIN084X7S | 7" | 4-3/4" | 3/4" | 3-3/8" | 5" | 8" | 1" | 3" | 3/8" | 80000 | 20000 | 5520 | 10900 |
| FOR 10" THICK PANEL 3+4+3 | | | | | | | | | | | | | | |
| 10 | FIN084X8 | 8" | 4-3/4" | 3/4" | 3-3/8" | 6" | n/a | n/a | n/a | n/a | 80000 | 20000 | 4910 | 9700 |
| 10 | FIN084X8S | 8" | 4-3/4" | 3/4" | 3-3/8" | 6" | 8" | 1" | 3" | 3/8" | 80000 | 20000 | 5210 | 9700 |

Safe working loads based on approximate 4:1 Safety Factor in 3,500 psi (4,500 psi for 10T anchors) normal weight concrete. UML= Ultimate Mechanical Load



Tension Vee

Based on ACI 318-14 requirements. For two-bar application. Multiply chart values by 1.3 for lightweight concrete. Multiply chart values by 1.2 for epoxy coated bars.

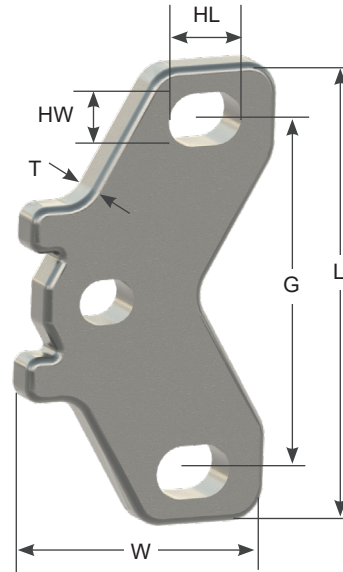
| TENSION VEES | REQUIRED TO DEVELOP REINFORCED ALLOWABLE TENSION CAPACITY | | | | | | | | |
|--------------|---|------------|------------------------|-------------------------------------|-------|-------|-------|-------|-------|
| | Nominal System Capacity | Rebar Size | Min. Bend Diameter (D) | Concrete Strength [psi] | | | | | |
| 2,200 | | | | 2,500 | 3,000 | 3,500 | 4,000 | 4,500 | 5,000 |
| | | | | Length of Rebar Before Bending [in] | | | | | |
| 4 Ton | 2 #4s | 3" | 37 | 35 | 32 | 30 | 30 | 30 | 30 |
| 6 Ton | 2 #4s | 3" | 55 | 52 | 48 | 45 | 42 | 40 | 38 |
| 8 Ton | 2 #5s | 3-3/4" | 59 | 56 | 51 | 48 | 45 | 43 | 41 |
| 9 Ton | 2 #5s | 3-3/4" | 67 | 75 | 69 | 65 | 61 | 58 | 55 |
| 10 Ton | 2 #6s | 4-1/2" | 63 | 59 | 54 | 51 | 48 | 45 | 43 |
| 12 Ton | 2 #6s | 4-1/2" | 75 | 71 | 65 | 61 | 57 | 54 | 52 |

Flat Steel System



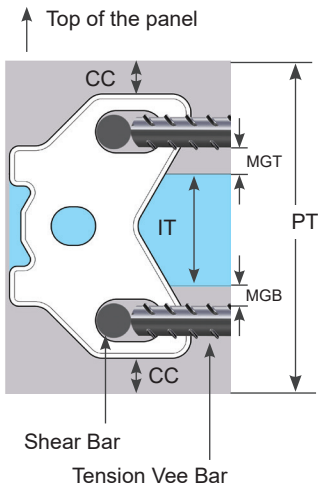
Forged Insulated Panel Erection Anchor

CONAC's CFIN Forged Insulated Panel Erection Anchor is designed for use in insulated panels. The design spans the insulation with minimal effect on thermal efficiency and achieves even load distribution throughout both wythes for optimal performance. The forging process ensures higher anchor strength and increased load capacity. Use of tension rebar V's is required to achieve full SWL, and shear bars develop maximum shear capacity.



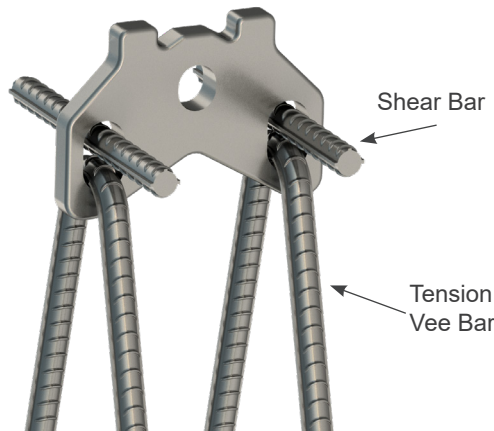
| TON | RING CLUTCH | ITEM CODE | LENGTH (L) | WIDTH (W) | THICK. (T) | HOLE CENT. (G) | HOLE LENGTH (HL) | HOLE WIDTH (HW) | UML TENSION (LBS) |
|-----|-------------|-----------|------------|-----------|------------|----------------|------------------|-----------------|-------------------|
| 6 | 4-6 T | CFIN6T | 7" | 4" | 5/8" | 5-3/8" | 1-3/16" | 13/16" | 48000 |
| 9 | 8-11 T | CFIN9T | 5-3/4" | 4-3/16" | 3/4" | 3-3/4" | 1-1/2" | 15/16" | 72000 |
| 12 | 12 T | CFIN12X7 | 7" | 4-13/16" | 3/4" | 5" | 1-13/16" | 1-1/8" | 96000 |
| 12 | 12 T | CFIN12X8 | 8" | 4-13/16" | 3/4" | 6" | 1-13/16" | 1-1/8" | 96000 |

UML= Ultimate Mechanical Load



| ITEM CODE | LENGTH (L) | PANEL THICKNESS | BOTTOM WYTHE | INSUL. THICK. | TOP WYTHE | MGT | MGB | CONCRETE COVER |
|-----------|------------|-----------------|--------------|---------------|-----------|--------|--------|----------------|
| CFIN6T | 7" | 8" | 2" | 4" | 2" | 7/16" | 7/16" | 1/2" |
| | | 9" | 3" | 3" | 3" | 15/16" | 15/16" | 1" |
| CFIN9T | 5-3/4" | 8" | 3" | 2" | 3" | 9/16" | 9/16" | 1-1/8" |
| CFIN12X7 | 7" | 9" | 3" | 3" | 3" | 5/8" | 5/8" | 1" |
| CFIN12X8 | 8" | 10" | 3" | 4" | 3" | 5/8" | 5/8" | 1" |
| | | 11" | 2-1/2" | 4" | 2-1/2" | 5/8" | 5/8" | 1/2" |

Minimum 1/2" concrete cover required on top and bottom of Insulated Panel Anchor.



Flat Steel System

Forged Insulated Panel Erection Anchor Load Chart

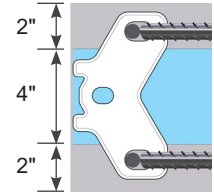
| TON | ITEM CODE | V1 SHEAR 4:1 (LBS) | V1 SHEAR 2.66:1 (LBS) | V2 SHEAR 4:1 (LBS) | SWL TENSION 4:1 (LBS) | UML TENSION (LBS) | TENSION REBAR GR 60 | SHEAR REBAR GR 60 |
|---------------------------------|-----------|-----------------------|--------------------------|-----------------------|--------------------------|----------------------|------------------------|----------------------|
| FOR 8" THICK PANEL 2+4+2 | | | | | | | | |
| 6 | CFIN6T | 2670 | 4020 | 8200 | 12000 | 48000 | #4 x 45" | #5 x 6" |

Safe working loads based on approximate 4:1 Safety Factor in 3,500 psi for 6 T anchor and 4,500 psi for 9T and 12T anchors normal weight concrete.

2.66:1 safety factor in shear may be used at the discretion of the engineer for stripping.

V1= Parallel Shear

V2= Perpendicular Shear



6 Ton Forged Anchor for 8" Panel

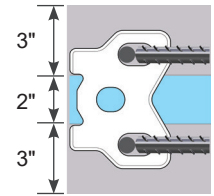
| TON | ITEM CODE | V1 SHEAR 4:1 (LBS) | V1 SHEAR 2.66:1 (LBS) | V2 SHEAR 4:1 (LBS) | SWL TENSION 4:1 (LBS) | UML TENSION (LBS) | TENSION REBAR GR 60 | SHEAR REBAR GR 60 |
|---------------------------------|-----------|-----------------------|--------------------------|-----------------------|--------------------------|----------------------|------------------------|----------------------|
| FOR 8" THICK PANEL 4+2+2 | | | | | | | | |
| 9 | CFIN9T | 4600 | 6910 | 9260 | 18000 | 72000 | #5 x 58" | #6 x 6" |
| FOR 8" THICK PANEL 3+2+3 | | | | | | | | |
| 9 | CFIN9T | 4400 | 6610 | 8700 | 18000 | 72000 | #5 x 58" | #6 x 6" |

Safe working loads based on approximate 4:1 Safety Factor in 3,500 psi for 6 T anchor and 4,500 psi for 9T and 12T anchors normal weight concrete.

2.66:1 safety factor in shear may be used at the discretion of the engineer for stripping.

V1= Parallel Shear

V2= Perpendicular Shear



9 Ton Forged Anchor for 8" Panel

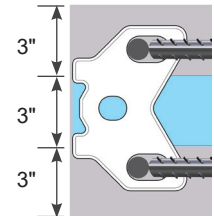
| TON | ITEM CODE | V1 SHEAR 4:1 (LBS) | V1 SHEAR 2.66:1 (LBS) | V2 SHEAR 4:1 (LBS) | SWL TENSION 4:1 (LBS) | UML TENSION (LBS) | TENSION REBAR GR 60 | SHEAR REBAR GR 60 |
|---------------------------------|-----------|-----------------------|--------------------------|-----------------------|--------------------------|----------------------|------------------------|----------------------|
| FOR 9" THICK PANEL 3+3+3 | | | | | | | | |
| 6 | CFIN6T | 4500 | 6780 | 9600 | 12000 | 48000 | #4 x 45" | #5 x 6" |
| 12 | CFIN12X7 | 4700 | 7060 | 10900 | 24000 | 96000 | #6 x 54" | #7 x 6" |

Safe working loads based on approximate 4:1 Safety Factor in 3,500 psi for 6 T anchor and 4,500 psi for 9T and 12T anchors normal weight concrete.

2.66:1 safety factor in shear may be used at the discretion of the engineer for stripping.

V1= Parallel Shear

V2= Perpendicular Shear



12 Ton Forged Anchor for 9" Panel

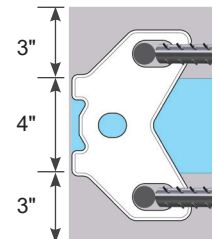
| TON | ITEM CODE | V1 SHEAR 4:1 (LBS) | V1 SHEAR 2.66:1 (LBS) | V2 SHEAR 4:1 (LBS) | SWL TENSION 4:1 (LBS) | UML TENSION (LBS) | TENSION REBAR GR 60 | SHEAR REBAR GR 60 |
|----------------------------------|-----------|-----------------------|--------------------------|-----------------------|--------------------------|----------------------|------------------------|----------------------|
| FOR 10" THICK PANEL 3+4+3 | | | | | | | | |
| 12 | CFIN12X8 | 4400 | 6610 | 9200 | 24000 | 96000 | #6 x 54" | #7 x 6" |

Safe working loads based on approximate 4:1 Safety Factor in 3,500 psi for 6 T anchor and 4,500 psi for 9T and 12T anchors normal weight concrete.

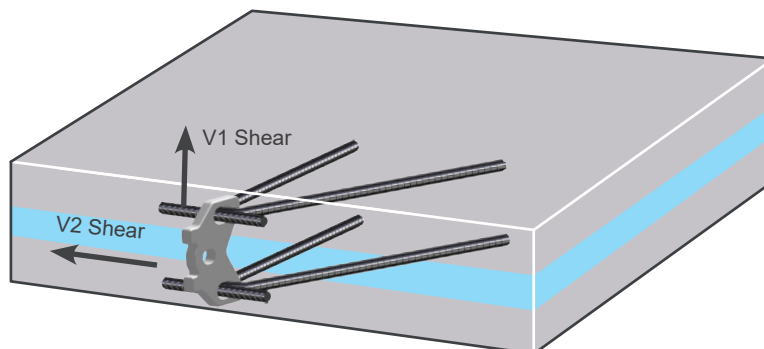
2.66:1 safety factor in shear may be used at the discretion of the engineer for stripping.

V1= Parallel Shear

V2= Perpendicular Shear



12 Ton Forged Anchor for 10" Panel

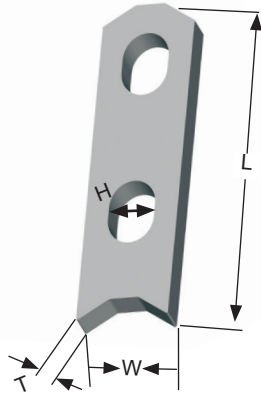


Flat Steel System



Two Hole Anchor

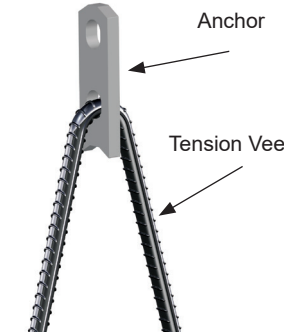
Lower hole accommodates rebar V's which are required to develop the SWL. Use only in tension.



| TON | SYS CODE | ITEM CODE | ANCHOR LENGTH (L) | REBAR HOLE (H) | BODY THICK. (T) | BODY WIDTH (W) | SWL TENSION (LBS) | UML (LBS) |
|-----|----------|-----------|-------------------|----------------|-----------------|----------------|-------------------|-----------|
| 2 | 2.5 | FTH02040 | 4" | 5/8" | 3/8" | 1-1/4" | 4000 | 16000 |
| 2 | 2.5 | FTH02028 | 2-3/4" | 9/16" | 3/8" | 1-1/4" | 4000 | 16000 |
| 4 | 5 | FTH04040 | 4" | 5/8" | 5/8" | 1-1/2" | 8000 | 32000 |
| 4 | 5 | FTH04055 | 5-1/2" | 11/16" | 5/8" | 1-1/2" | 8000 | 32000 |
| 8 | 10 | FTH08070 | 7" | 1" | 3/4" | 2-1/2" | 16000 | 64000 |
| 22 | 22 | FTH22118 | 11-3/4" | 1-1/2" | 1" | 3-3/4" | 44000 | 176000 |

UML= Ultimate Mechanical Load

Safe working loads based on approximate 4:1 Safety Factor in 3,500 psi normal weight concrete.



V's are required to develop SWL.

| TENSION VEES | | REQUIRED TO DEVELOP REINFORCED ALLOWABLE TENSION CAPACITY | | | | | | |
|-------------------------|------------|---|-------|-------|-------|-------|-------|-------|
| | | Concrete Strength [psi] | | | | | | |
| Nominal System Capacity | Rebar Size | 2,200 | 2,500 | 3,000 | 3,500 | 4,000 | 4,500 | 5,000 |
| | | Length of Rebar Before Bending [in] | | | | | | |
| 2 Ton | #3 | 33 | 32 | 29 | 27 | 25 | 24 | 24 |
| 4 Ton | #4 | 49 | 46 | 43 | 40 | 37 | 35 | 34 |
| 8 Ton | #6 | 67 | 63 | 58 | 54 | 51 | 48 | 46 |
| 10 Ton | #7 | 88 | 83 | 76 | 71 | 67 | 63 | 60 |
| 22 Ton | #9 | 150 | 141 | 129 | 120 | 113 | 107 | 102 |

Based on ACI 318-14 requirements.

For single bar application.

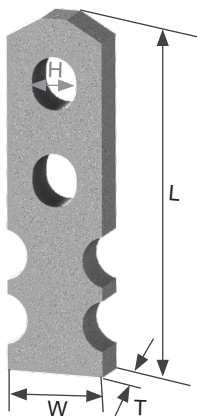
Multiply chart values by 1.3 for lightweight concrete.

Multiply chart values by 1.2 for epoxy coated bars.

Two Hole Tech Anchor

Indentations in the sides of the anchor increase bond to develop additional tensile capacity without the tension "V"s.

(Tension "V"s are still necessary to develop the full mechanical capacity of the anchor). Use only in tension.



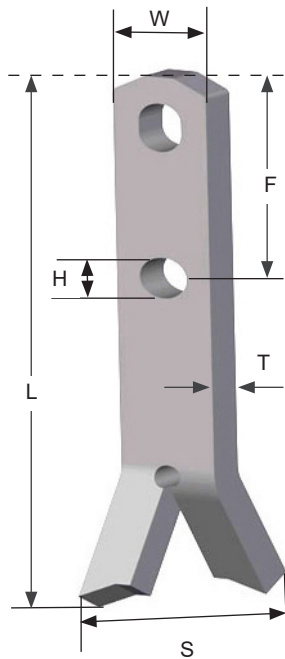
| TON | SYS CODE | ITEM CODE | ANCHOR LENGTH (L) | REBAR HOLE (H) | BODY THICK. (T) | BODY WIDTH (W) | SWL TENSION (LBS) | UML (LBS) |
|-----|----------|------------|-------------------|----------------|-----------------|----------------|-------------------|-----------|
| 2 | 2.5 | FTH-T02050 | 4-15/16" | 5/8" | 3/8" | 1-1/4" | 4000 | 16000 |
| 4 | 5 | FTH-T04055 | 5-7/16" | 5/8" | 5/8" | 1-1/2" | 8000 | 32000 |

UML= Ultimate Mechanical Load

Safe working loads based on approximate 4:1 Safety Factor in 3,500 psi normal weight concrete.

Spread Anchor

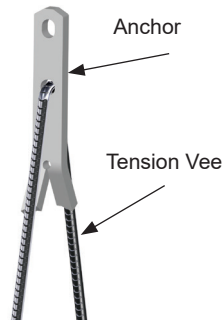
Used for both stripping and erecting. With proper edge distances can be pulled in any direction.



| TON | SYS CODE | ITEM CODE | BODY LENGTH (L) | BODY WIDTH (W) | BODY THICK. (T) | BASE SPREAD (S) | HOLE LOCA. (F) | HOLE DIA. (H) | MIN EDGE DIST. | SWL TENSION (LBS) | SWL TENSION W/TENSION BAR (LBS) |
|-----|----------|-----------|-----------------|----------------|-----------------|-----------------|----------------|---------------|----------------|-------------------|---------------------------------|
| 1 | 2.5 | FSP02048 | 4-3/4" | 1-1/4" | 3/16" | 2-3/4" | N/A | N/A | 5-3/8" | 2000 | 2000 |
| 2 | 2.5 | FSP02040 | 4" | 1-1/4" | 3/8" | 2-3/4" | N/A | N/A | 4-5/8" | 2993 | 4000 |
| 2 | 2.5 | FSP02055 | 5-1/2" | 1-1/4" | 3/8" | 2-3/4" | 2-1/4" | 1/2" | 6-1/8" | 4000 | 4000 |
| 4 | 5 | FSP04040 | 4" | 1-1/2" | 1/2" | 3-3/8" | N/A | N/A | 4-3/4" | 2994 | 8000 |
| 4 | 5 | FSP04048 | 4-3/4" | 1-1/2" | 1/2" | 3-3/8" | N/A | N/A | 5-1/2" | 3805 | 8000 |
| 4 | 5 | FSP04068 | 6-3/4" | 1-1/2" | 1/2" | 3-3/8" | 3-3/4" | 7/8" | 7-1/2" | 6262 | 8000 |
| 4 | 5 | FSP04063 | 6-1/4" | 1-1/2" | 5/8" | 3-3/8" | 3-3/4" | 11/16" | 7-1/8" | 5703 | 8000 |
| 4 | 5 | FSP04095 | 9-1/2" | 1-1/2" | 5/8" | 3-3/8" | 3-3/4" | 11/16" | 10-1/4" | 8000 | 8000 |
| 6 | 10 | FSP06110 | 11" | 2-1/2" | 5/8" | 5-1/4" | 5" | 1" | 12-1/4" | 12000 | 12000 |
| 8 | 10 | FSP08110 | 11" | 2-1/2" | 3/4" | 5-1/4" | 5" | 1" | 12-1/4" | 12859 | 16000 |
| 16 | 22 | FSP22150 | 15" | 3-3/4" | 1" | 6-1/4" | 7-1/2" | 1-3/8" | 16-5/8" | 21593 | 32000 |
| 22 | 22 | FSP22189 | 18-7/8" | 3-3/4" | 1" | 6-1/4" | 13" | 1-3/8" | 20-1/2" | 31042 | 44000 |

Safe working loads based on approximate 4:1 Safety Factor in 3,500 psi normal weight concrete.

V's are required to develop SWL.



| TENSION VEES | REQUIRED TO DEVELOP REINFORCED ALLOWABLE TENSION CAPACITY | | | | | | | |
|--------------|---|-------------------------------------|-------------------------|-------|-------|-------|-------|-------|
| | Nominal System Capacity | Rebar Size | Concrete Strength [psi] | | | | | |
| | | | 2,200 | 2,500 | 3,000 | 3,500 | 4,000 | 4,500 |
| | | Length of Rebar Before Bending [in] | | | | | | |
| 2 Ton | #3 | 33 | 32 | 29 | 27 | 25 | 24 | 24 |
| 4 Ton | #4 | 49 | 46 | 43 | 40 | 37 | 35 | 34 |
| 8 Ton | #6 | 67 | 63 | 58 | 54 | 51 | 48 | 46 |
| 10 Ton | #7 | 88 | 83 | 76 | 71 | 67 | 63 | 60 |
| 16 Ton | #8 | 130 | 122 | 112 | 105 | 98 | 93 | 89 |
| 22 Ton | #9 | 150 | 141 | 129 | 120 | 113 | 107 | 102 |

Based on ACI 318-14 requirements.

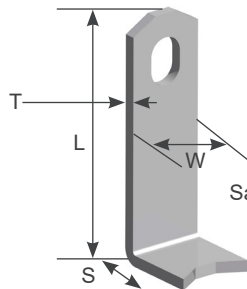
For single bar application.

Multiply chart values by 1.3 for lightweight concrete.

Multiply chart values by 1.2 for epoxy coated bars.

L-Anchor

Used for back stripping precast panels.



| TON | SYS CODE | ITEM CODE | ANCHOR LENGTH (L) | BODY WIDTH (W) | BODY THICK. (T) | FOOT LENGTH (S) | SWL TENSION (LBS) | UML (LBS) |
|-----|----------|--------------|-------------------|----------------|-----------------|-----------------|-------------------|-----------|
| 1 | 2.5 | FL 1-1/4"X4" | 4" | 1-1/4" | 3/16" | 1-1/2" | 2000 | 8000 |

Safe working loads based on approximate 4:1 Safety Factor in 3,500 psi normal weight concrete.

UML= Ultimate Mechanical Load

Flat Steel System




Plate Anchor (Square Base)

The CONAC FPA-S Series Anchors have been developed with a large square base, increasing the shear cone within the concrete and eliminating the requirement for additional rebar reinforcement over the base plate in achieving the listed SWL.

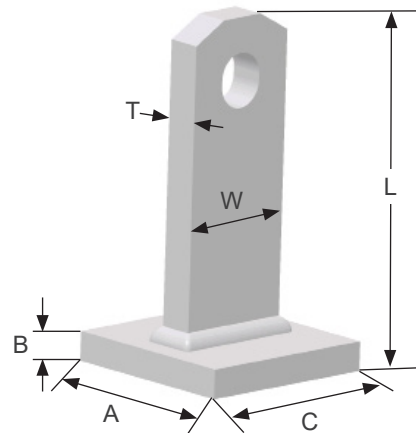
| TON | SYS CODE | ITEM CODE | ANCHOR DEPTH (L) | BODY WIDTH (W) | BODY THICK. (T) | BASE THICK. (B) | BASE WIDTH (A) | BASE LENGTH (C) | MIN EDGE DIST. | SWL TENSION (LBS) | SWL SHEAR (LBS) | UML (LBS) |
|-----|----------|-------------|------------------|----------------|-----------------|-----------------|----------------|-----------------|----------------|-------------------|-----------------|-----------|
| 4 | 5 | FPA-S043916 | 3-9/16" | 1-1/2" | 5/8" | 3/8" | 3" | 3" | 7-1/2" | 5500 | 5500 | 32000 |
| 4 | 5 | FPA-S044916 | 4-9/16" | 1-1/2" | 5/8" | 3/8" | 3" | 3" | 9" | 7000 | 7000 | 32000 |
| 8 | 10 | FPA-S08638 | 6-3/8" | 2-1/2" | 3/4" | 5/8" | 4" | 4" | 12-1/2" | 15250 | 15250 | 64000 |
| 8 | 10 | FPA-S08738 | 7-3/8" | 2-1/2" | 3/4" | 5/8" | 4" | 4" | 14" | 16000 | 16000 | 64000 |

Safe working loads based on approximate 4:1 Safety Factor in 3,500 psi normal weight concrete.

UML= Ultimate Mechanical Load




When used in shear, the load should be perpendicular to the face of the anchor.



The larger square base allows achieving listed SWL without additional rebar reinforcement over the base plate.

Plate Anchor

Bottom plate allows high strength for stripping and erecting. Reinforcement required to develop SWL.

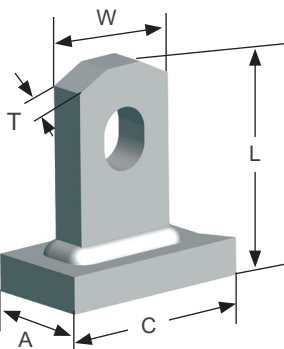


When used in shear, the load should be perpendicular to the face of the anchor.

| TON | SYS CODE | ITEM CODE | ANCHOR DEPTH (L) | BODY WIDTH (W) | BODY THICK. (T) | BASE WIDTH (A) | BASE LENGTH (C) | MIN EDGE DIST. | SWL TENSION (LBS) | SWL SHEAR (LBS) | SWL TENSION REINFORCED (LBS) | SWL SHEAR REINFORCED (LBS) | UML (LBS) |
|-----|----------|------------|------------------|----------------|-----------------|----------------|-----------------|----------------|-------------------|-----------------|------------------------------|----------------------------|-----------|
| 2 | 2.5 | FPA02023 | 2-1/4" | 1-1/4" | 3/8" | 1-1/4" | 3-3/4" | 4-1/2" | 2043 | 2043 | 4000 | 4000 | 16000 |
| 4 | 5 | FPA04030 | 3" | 1-1/2" | 5/8" | 1-1/2" | 3" | 5-3/4" | 3422 | 3422 | 8000 | 8000 | 32000 |
| 4 | 5 | FPA04035 | 3-1/2" | 1-1/2" | 5/8" | 1-1/2" | 3" | 6-1/2" | 4095 | 4095 | 8000 | 8000 | 32000 |
| 4 | 5 | FPA04044 | 4-3/8" | 1-1/2" | 5/8" | 1-1/2" | 3-7/8" | 7-3/4" | 5178 | 5178 | 8000 | 8000 | 32000 |
| 4 | 5 | FPA04063 | 6-1/8" | 1-1/2" | 5/8" | 1-1/2" | 3-7/8" | 10-1/2" | 8000 | 8000 | 8000 | 8000 | 32000 |
| 8 | 10 | FPA08061 | 6-1/4" | 2-1/2" | 3/4" | 2-1/2" | 5" | 11-1/2" | 7726 | 7726 | 12000 | 12000 | 64000 |
| 8 | 10 | FPA08071-1 | 7-1/8" | 2-1/2" | 3/4" | 2-1/2" | 4" | 12" | 9054 | 9054 | 16000 | 16000 | 64000 |
| 8 | 10 | FPA08073 | 7" | 3" | 3/4" | 3" | 4" | 12" | 9054 | 9054 | 16000 | 16000 | 64000 |
| 8 | 10 | FPA08093 | 9" | 3" | 3/4" | 3" | 4" | 15-1/2" | 12920 | 12920 | 16000 | 16000 | 64000 |

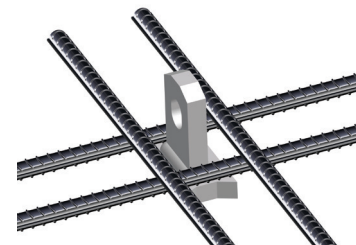
Safe working loads based on approximate 4:1 Safety Factor in 3,500 psi normal weight concrete.

UML= Ultimate Mechanical Load



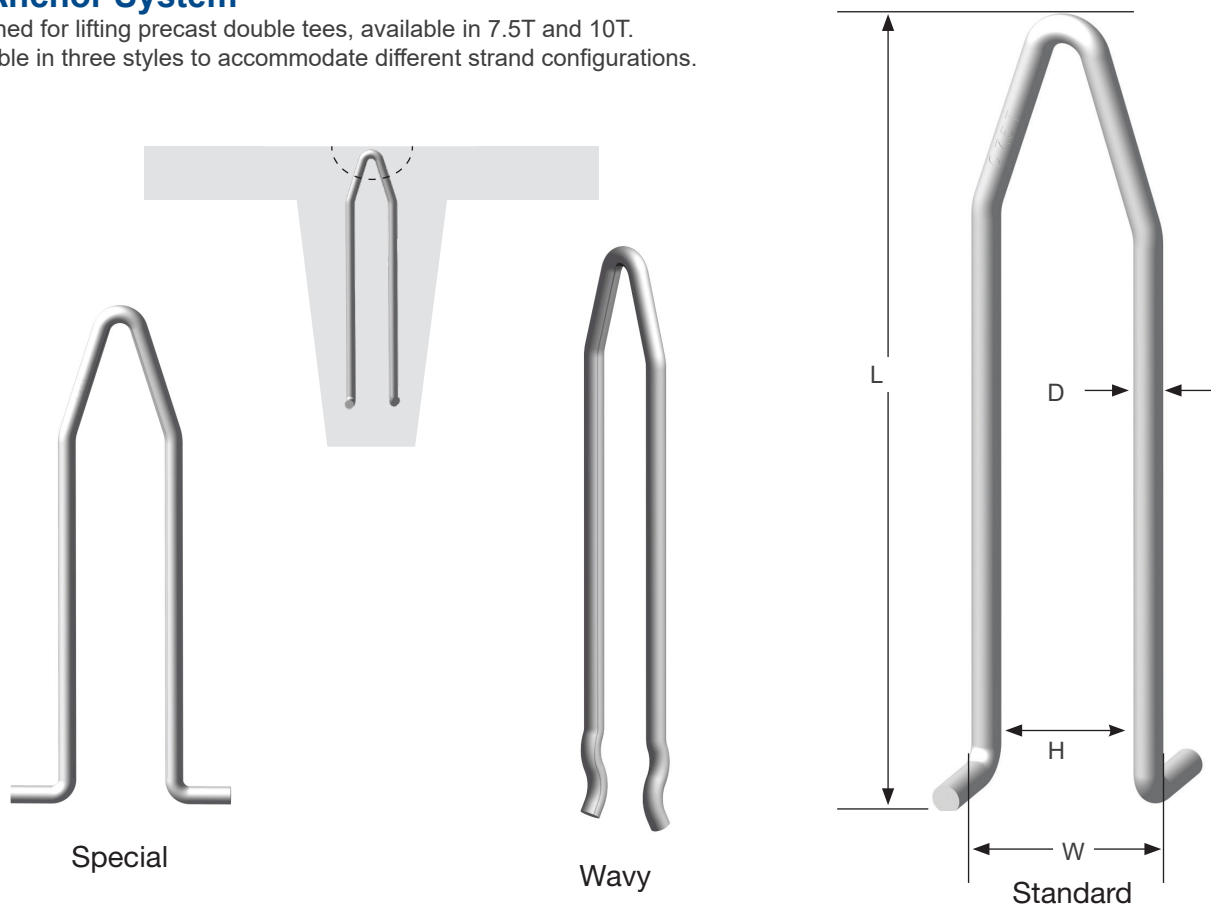
Reinforced Allowable Tension Capacities require the use of additional rebars positioned as shown over the base plate of the anchor.

- For 2 Ton anchors, use 2 x #4 rebars x 12" long each direction (in 3500 psi concrete).
- For 4 and 8 Ton anchors (FPA08061), use 2 x #4 rebars x 18" long each direction (in 3500 psi concrete).
- For 8 Ton anchors (FPA08071-1 and longer), use 2 x #4 rebars x 21" long each direction (in 3500 psi concrete).



TT Anchor System

Designed for lifting precast double tees, available in 7.5T and 10T. Available in three styles to accommodate different strand configurations.



| TON | SYS CODE | ITEM CODE | LENGTH (L) | Standard OUTSIDE WIDTH (W) | Special OUTSIDE WIDTH (W) | Wavy OUTSIDE WIDTH (W) | INSIDE WIDTH (H) | DIAMETER (D) | SWL TENSION (LBS) | UML TENSION (LBS) |
|-----|----------|-----------|------------|-------------------------------|------------------------------|---------------------------|------------------|--------------|-------------------|-------------------|
| 7.5 | 10 | TT 7.5T | 18" | 4-3/8" | 7-3/4" | N/A | 3-1/8" | 16 MM | 15000 | 60000 |
| 10* | 10 | TT 10T | 22-7/8" | 3-7/8" | 7-7/8" | 3-7/8" | 2-5/16" | 20 MM | 20000 | 80000 |

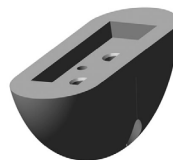
UML= Ultimate Mechanical Load in tension

Safe working loads based on approximate 4:1 Safety Factor in 3,500 psi normal weight concrete.

*CONAC FRC11B (11 Ton Ring Clutch) must be used for 20,000 SWL.

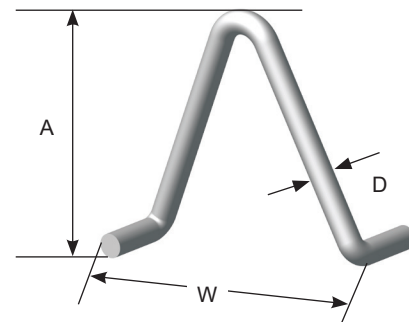
TT Recess Former

Designed for use with CONAC Double Tee and Safe Lift anchors.



Safe Lift Anchor

Designed for face-lifting solid panels or insulated panels with sufficient thickness of back wythe.



| ITEM CODE | ANCHOR DEPTH (A) | ANCHOR WIDTH (W) | BODY DIAMETER (D) | PANEL DEPTH | SWL TENSION (LBS) | SWL SHEAR (LBS) |
|--------------|------------------|------------------|-------------------|-------------|-------------------|-----------------|
| SF-ANCHOR 6T | 7-3/4" | 6" | .70" | 8" | 10000 | 13000 |

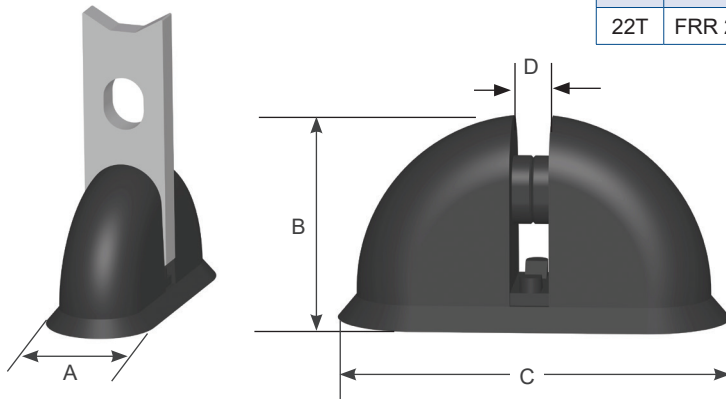
Safe working loads based on approximate 4:1 Safety Factor in 4,000 psi normal weight concrete

Flat Steel System



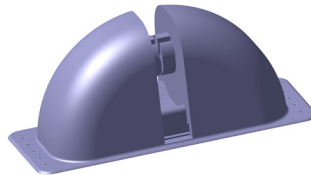
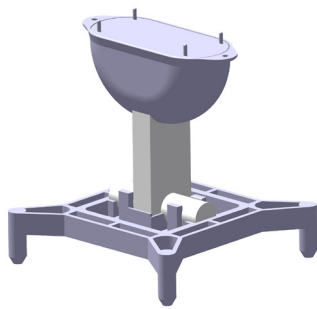
Rubber Recess Former

Reusable recess member. When attached to holding plate, allows positioning and handling of anchor.



| TON | ITEM CODE | A | B | C | D | SYSTEM CODE |
|-----|-----------|--------|---------|--------|--------|-------------|
| 2T | FPRF02 | 1-3/4" | 2" | 3-5/8" | 3/8" | 2.5T |
| 4T | FPRF04 | 2-1/8" | 2-5/16" | 4-1/2" | 5/8" | 5.0T |
| 8T | FPRF08 | 2-3/4" | 3-1/2" | 6-1/2" | 3/4" | 10.0T |
| 22T | FRR 22 | 4-1/4" | 4-5/8" | 9-3/8" | 1-1/4" | 22.0T |

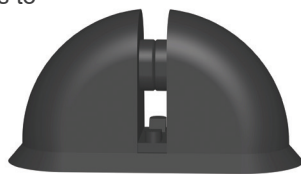
Plastic Recess Former



| TON | ITEM CODE | A | B | C | D | SYSTEM CODE |
|-----|-----------|---------------------------------|--------|----------|------|-------------|
| 4T | FPRF04-EA | 1-7/8" | 2-1/4" | 4-15/16" | 5/8" | 5.0T |
| 8T | FPRF08-EA | 3-1/8" | 3-1/4" | 7-7/8" | 3/4" | 10.0T |
| 4T | FTARRF | PLASTIC FORMER FOR T-BAR ANCHOR | | | | |
| 4T | FTA BASE | PLASTIC BASE FOR T-BAR ANCHOR | | | | |

Magnetic Rubber Recess Former

To attach flat steel anchors to steel forms.

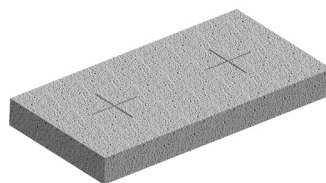


| TON | ITEM CODE | A | B | C | D | SYSTEM CODE |
|-----|-----------|--------|---------|--------|------|-------------|
| 2T | FRR02M | 1-3/4" | 2" | 3-5/8" | 3/8" | 2.5T |
| 4T | FRR04M | 2-1/8" | 2-5/16" | 4-1/2" | 5/8" | 5.0T |
| 8T | FRR08M | 2-3/4" | 3-1/2" | 6-1/2" | 3/4" | 10.0T |

Other sizes available by request.

Foam Strips

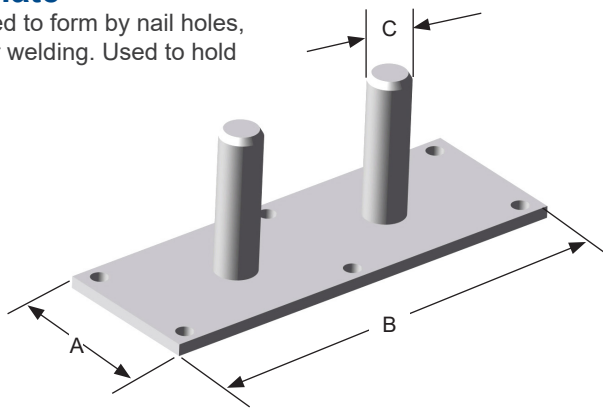
Prevents concrete entering the void when using steel recess former.



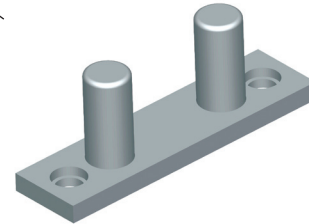
| TON | ITEM CODE | A | SYSTEM CODE |
|-----|-----------|--------------------|-------------|
| 2T | FEA02RF | 1/4" X 1-3/4" X 4" | 2.5T |
| 4T | FEA04RF | 1/4" X 1-3/4" X 4" | 5.0T |
| 8T | FEA08RF | 5/8" X 3" X 6" | 10.0T |

Holding Plate

May be attached to form by nail holes, screw holes, or welding. Used to hold recess former.

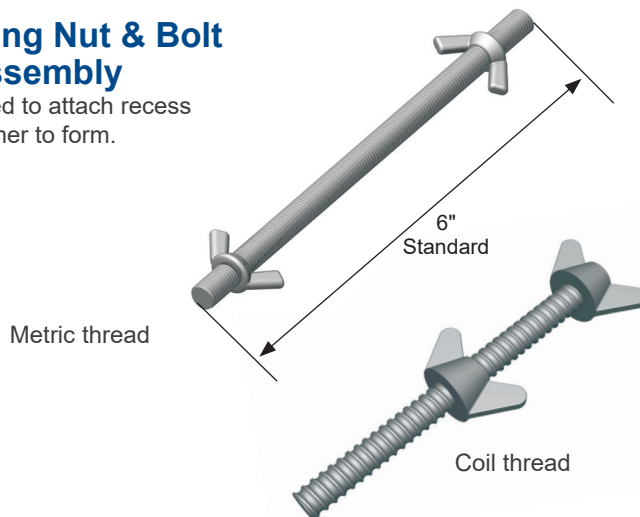


| TON | ITEM CODE | A | B | C | SYSEM CODE |
|-----|-----------|--------|--------|------|------------|
| 2T | FHP02 | 5/8" | 2-3/4" | 10mm | 2.5T |
| 4T | FHP04 | 1-1/4" | 3-3/8" | 10mm | 5.0T |
| 8T | FHP08 | 1-3/4" | 4-7/8" | 12mm | 10.0T |
| 22T | FHP22 | 2-1/2" | 7" | 16mm | 22.0T |



Wing Nut & Bolt Assembly

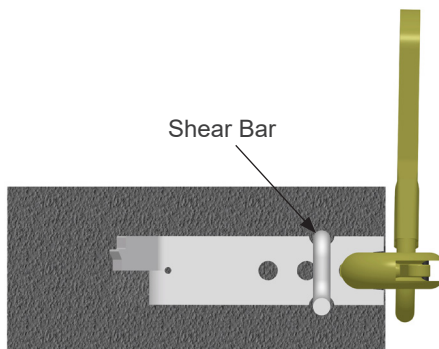
Used to attach recess former to form.



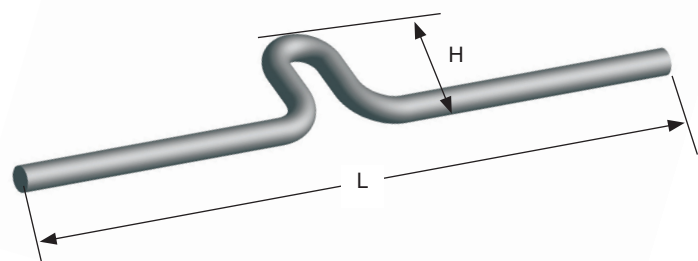
| TON | ITEM CODE | STANDARD ROD LENGTH | THREAD DIAMETER & TYPE | SYSTEM CODE |
|-----|-----------|---------------------|------------------------|-------------|
| 2T | FWN02 | 6" | M8 | 2.5T |
| 4T | FWN04 | 6" | M8 | 5.0T |
| 8T | FWN08 | 6" | M12 | 10.0T |
| 22T | FWNC 1/2" | 5-1/2" | 1/2" COIL | 22.0T |
| | FWNC 1/2" | 5-1/2" | 1/2" COIL | 5.0T |
| | FWNC 3/8" | 6" | 3/8" COIL | 5.0T |

Shear Bar

Used with flat steel erection anchor to increase shear capacity.



| TON | ITEM CODE | SHEAR BAR DIAMETER | MIN. PANEL THICKNESS | HIGH (H) | LENGTH (L) | SYSTEM CODE |
|-----|-----------|--------------------|----------------------|----------|------------|-------------|
| 2T | FSB02 | 1/2" | 4" | 2-1/2" | 13-7/8" | 2.5T |
| 4T | FSB04 | 1/2" | 5-1/2" | 3-5/16" | 13-7/8" | 5.0T |
| 8T | FSB08 | 1/2" | 7-1/2" | 4-15/16" | 13-7/8" | 10.0T |



Flat Steel System



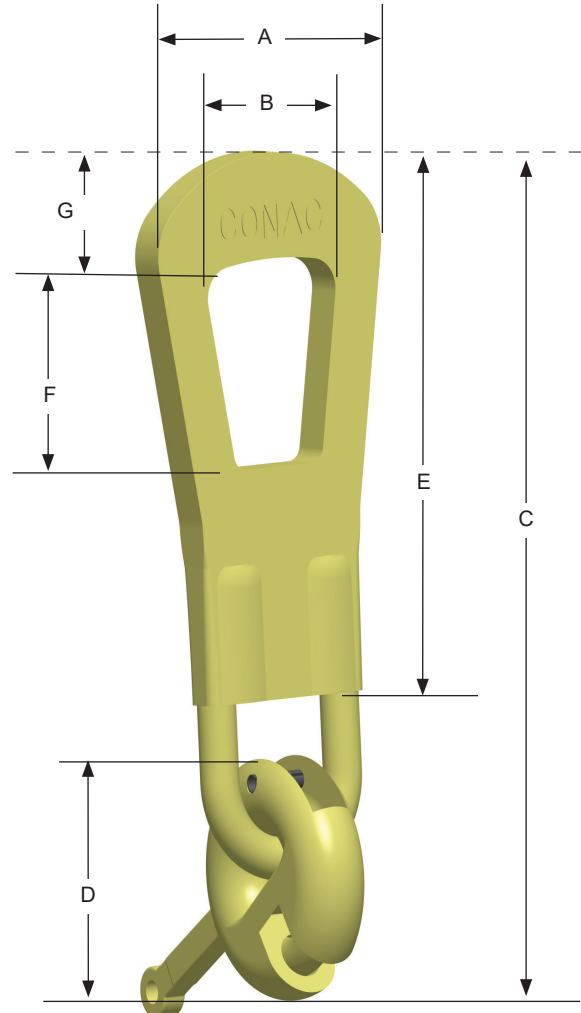
Ring Clutch With Bail

Designed to be used specifically for flat steel lifting.
 Handle allows for safe locking of clutch into lifting position.
 Standard finish plated.

| TON | ITEM CODE | A | B | C | D | E | F | G | SYS. CODE |
|-------|-----------|--------|--------|---------|--------|---------|--------|--------|-----------|
| 2-3T | FRC02 B | 3-5/8" | 2-1/8" | 10-1/2" | 3" | 7" | 2-3/4" | 1-1/4" | 2.5T |
| 4-6T | FRC04 B | 4-1/2" | 2-5/8" | 12-7/8" | 4" | 8-1/2" | 3-1/2" | 1-1/2" | 5T |
| 8-10T | FRC08 B | 5-1/2" | 3" | 17" | 5-7/8" | 10-3/8" | 4-1/2" | 1-3/4" | 10T |
| 11T | FRC11 B | 5-1/2" | 3" | 17" | 5-7/8" | 10-3/8" | 4-1/2" | 1-3/4" | 10T |
| 12T | FRC12 B | 5-1/2" | 3" | 17" | 5-7/8" | 10-3/8" | 4-1/2" | 1-3/4" | 10T |
| 22T | FRC22 B | 8-3/8" | 4-1/2" | 24" | 8" | 15" | 6-3/4" | 2-5/8" | 22T |

Safe working loads based on 5:1 Safety Factor.

| TON | ITEM CODE | H |
|-------|-----------|--------|
| 2-3T | FRC02B | 0.559" |
| 4-6T | FRC04B | 0.728" |
| 8-10T | FRC08B | 0.885" |
| 11T | FRC11B | 0.885" |
| 12T | FRC12B | 0.885" |
| 22T | FRC22B | 1.385" |



3. Operating Instructions

The CONAC Ring Clutch can be used for parallel/transversal shear pulls (Figure 1 & 2) and straight tension pulls (figure 2).

INCORRECT
 Bail should never contact edge of concrete to avoid bending the bail.

CORRECT
 Load line should be in line with the center of the bail, lifting from the top of the bail only.

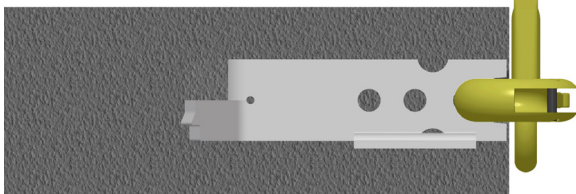


Figure 1

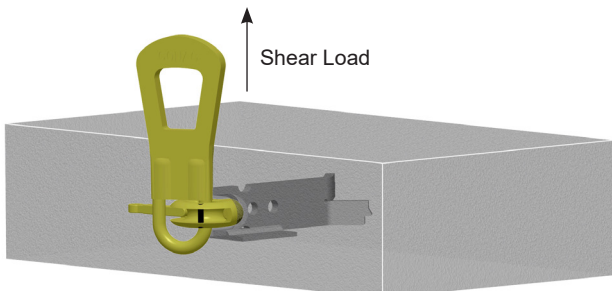


Figure 2

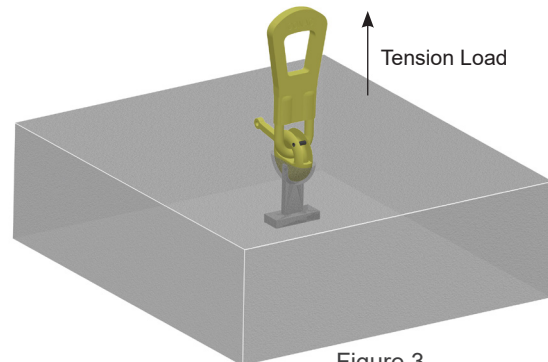


Figure 3

1. General

The CONAC Ring Clutch is a load lifting device. It engages the head of a Flat Steel anchor inside of the recess created by the CONAC Recess Former. The bail is made from robust, hardened and tempered cast steel. The CONAC Ring Clutch meets the requirements of the "Safety regulations for lifting precast concrete units". Important references include but are not limited to: OSHA Part 1926 and ANSI 10.9.

2. Identification

The identification meets the "Safety regulations for lifting precast concrete units" as follows:

| | |
|------------------|-------------|
| Manufacturer | CONAC |
| Type | Ring Clutch |
| Size | e.g. 4T |
| Manufacture Year | e.g. 20 |
| Batch Number | e.g.1234 |

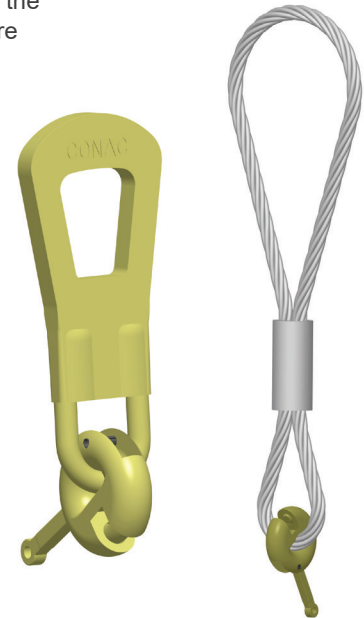
3. Care, Inspection and Maintenance of Ring Clutches (For Both Steel Bail and Cable)

CONAC Flat Steel System Ring Clutches may become worn after extended use or may be damaged through misuse, overloading, or a number of other factors, any one of which may affect the Safe Working Load of the Ring Clutch.

Users must establish a system of periodic inspections which should include the following:

1. Inspect for general condition and wear.
2. Assure that the bail is free to rotate in all directions.
3. If the bail is bent or twisted, the clutch must be destroyed.
4. Check the curved bolt for wear, cracking or bending.
5. Check the clutch body for wear, cracking or deformation.
6. If it appears that the Ring Clutch has been heated in any way, the clutch must be destroyed.
7. Check the engagement slot, if the gap is larger than dimension H, the clutch must be destroyed.

Destroy any unit that is worn, damaged, bent or twisted by cutting off the bail. No repair or welding is permitted.



Flat Steel System

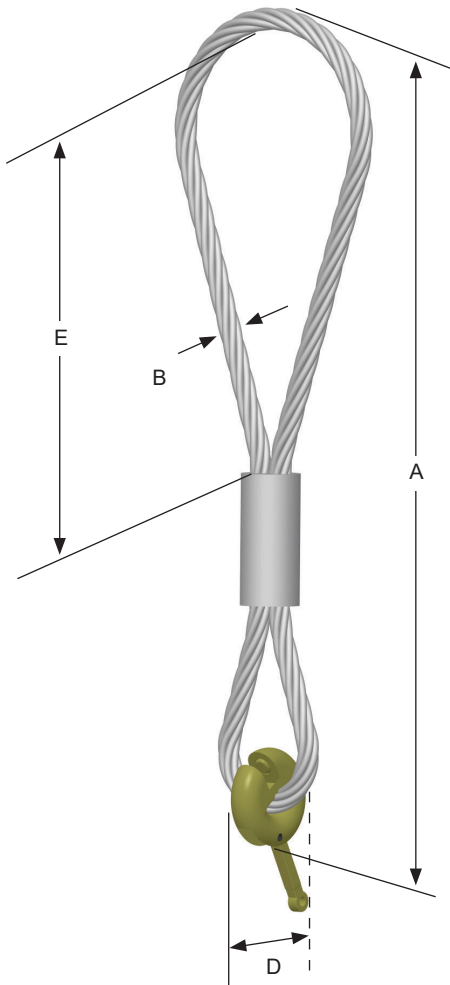


Ring Clutch W/Cable

Designed to be used specifically for flat steel lifting. Cable is more flexible than bail allowing some latitude in the direction of lift. Handle allows for a more safe locking of clutch into lifting position.

| TON | ITEM CODE | A | B | D | E | SYSTEM CODE |
|-------|-----------|---------|-------|--------|-----|-------------|
| 2-3T | FRC02 | 23-1/2" | 14 mm | 3" | 12" | 2.5T |
| 4-6T | FRC04 | 25-1/2" | 18 mm | 4" | 12" | 5.0T |
| 8-10T | FRC08 | 31" | 22 mm | 5-7/8" | 12" | 10.0T |
| 11T | FRC11 | 31" | 22 mm | 5-7/8" | 12" | 10.0T |

Safe working loads based on 5:1 Safety Factor.



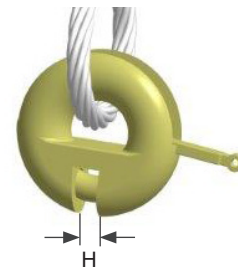
CARE, INSPECTION AND MAINTENANCE OF RING CLUTCHES (FOR BOTH STEEL BAIL AND CABLE BAIL)

CONAC Flat Steel System Ring Clutches may become worn after extended use or may be damaged through misuse, overloading, or a number of other factors, any one of which may affect the Safe Working Load of the Ring Clutch.

Responsible users will establish a system of periodic inspections which should include the following:

1. Inspect for general condition and wear.
2. Assure that the bail is free to rotate in all directions.
3. If the bail is bent or twisted, the clutch must be destroyed.
4. Check the curved bolt for wear, cracking or bending.
5. Check the clutch body for wear, cracking or deformation.
6. If it appears that the Ring Clutch has been heated in any way, the clutch must be destroyed.
7. Check the engagement slot, if the gap is larger than dimension H, the clutch must be destroyed.

| TON | ITEM CODE | H (MAX) |
|-------|-----------|---------|
| 2-3T | FRC02 | 0.619" |
| 4-6T | FRC04 | 0.787" |
| 8-10T | FRC08 | 0.944" |
| 11T | FRC11 | 0.944" |
| 12T | FRC12B | 0.944" |



ADDITIONAL INSPECTION OF CABLE BAIL

1. Inspect cable for general condition and wear.
2. Check cable for nicks, kinks, crushing or bends.
3. Check for frayed or loose outer strands.
4. Check for cable swelling.

If the cable is damaged, the Ring Clutch must be destroyed as above. Destroy any unit that is worn, damaged, bent or twisted by cutting off the bail. No repair or welding is permitted.

