Aggre-Gator®
300 Series Stainless Steel
Threaded Concrete Anchors

ELCO®

# Aggre-Gator® Bi-Metal Fasteners: The corrosion resistance of 300 series stainless steel in a threaded concrete anchor

Owners, architects and, design engineers expect longer life cycles from buildings. Extended warranties and use of more sustainable materials add up to greater expectations for performance – from structural integrity to the purely aesthetic – of all building components.

## The Solution: Aggre-Gator Bi-Metal Threaded Concrete Anchors

- Made of 300 series (18-8) stainless steel alloy to provide unmatched corrosion resistance in your toughest applications
- Fused and hardened steel tapping threads make installations easy and hold tight in block and poured concrete
- Coated with silver-colored Stalgard® GB, a Galvanic Barrier to protect aluminum components from accelerated corrosion when in contact with 300 series stainless steel
- Gimlet point provides quick starts, and makes Aggre-Gator anchors an ideal choice for treated, wood-to-wood applications

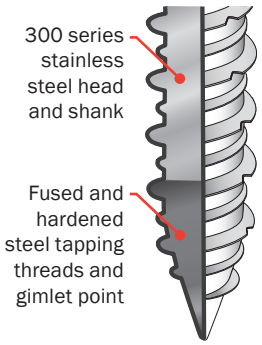
## Applications

- Exposed anchoring/coastal/wet areas
- Aluminum enclosures
- Hurricane shutters/windows/awnings/thresholds
- Curtain wall & window wall support anchors
- Stone facade support anchors
- ACQ-treated wood

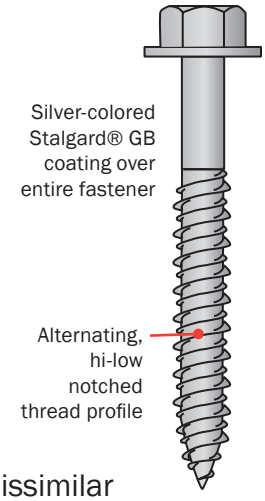
You won't find a better, easier-to-install or more reliable 300 series stainless steel anchor for your toughest construction applications than Aggre-Gator bi-metal concrete anchors.

## Features

- Bi-metal technology – 300 (18-8) stainless steel head and shank
- Fused and hardened steel tapping threads and gimlet point
- Alternating, hi-low notched thread profile
- Silver-colored Stalgard GB coating



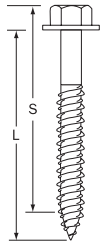
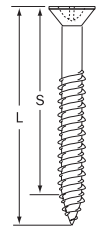

- Hex washer head and TrimFit® flat head designs




## Benefits

- Outstanding corrosion resistance
- Long service life
- High strength and ductility
- Offers greater galvanic compatibility in dissimilar metal applications involving aluminum
- Thread profile provides quick cutting and stability during installations
- High in-place value over life of structures

## Selection Guide

| | Dia. | L Length | Length Code† | Drive System | Head Style | Drill Bit Size* (Carbide) | S 300 Series (18-8) Stainless Steel Length | ECP Catalog Number* | Pieces Per Box | Pieces Per ¼ Keg |
|---|---|---|---|---|---|---|---|---|---|---|
| **Hex Washer Head** | | | | | | | | | | |
|  | 1/4" | 1-3/4" | A | 5/16" hex | hex washer | 3/16" X 3-1/2" | 1-1/4" | HFML315 | 50 | 2000 |
| | | 2-1/4" | B | | | 3/16" X 4-1/2" | 1-3/4" | HFML325 | 50 | 1500 |
| | | 2-3/4" | C | | | 3/16" X 4-1/2" | 2-1/4" | HFML335 | 50 | 1000 |
| | | 3-1/4" | D | | | 3/16" X 5-1/2" | 2-3/4" | HFML345 | 50 | 1000 |
| | | 4" | F | | | 3/16" X 5-1/2" | 3-1/2" | HFML365 | 50 | 500 |
| **TrimFit® Flat Head Fasteners** | | | | | | | | | | |
|  | 1/4" | 1-3/4" | A | #3 phillips | TrimFit flat head | 3/16" X 3-1/2" | 1-1/4" | HFMM310 | 50 | 2500 |
| | | 2-1/4" | B | | | 3/16" X 4-1/2" | 1-3/4" | HFMM320 | 50 | 1500 |
| | | 2-3/4" | C | | | 3/16" X 4-1/2" | 2-1/4" | HFMM330 | 50 | 1000 |
| | | 3-1/4" | D | | | 3/16" X 5-1/2" | 2-3/4" | HFMM340 | 50 | 1000 |
| | | 4" | F | | | 3/16" X 5-1/2" | 3-1/2" | HFMM360 | 50 | 500 |

† Length code is marked on top of fastener head (see Identification section).

## Identification

The head markings consists of the number “3”, the length code, and the Elco® logo as shown to the right.


**TrimFit® head**


**hex washer head**

## The Ideal Solution

- Unmatched, multi-level corrosion resistance
- Quick and easy installs into concrete or masonry
- Perfect choice for exposed/wet areas/aggressive environments, such as coastal areas
- High performance for your most critical applications

Aggre-Gator 300 Series Stainless Steel Threaded Concrete Anchors

ELCO

Miami-Dade County Product Control Approved: NOA No. 08-0813.06
High Velocity Hurricane Zone

## Performance Data

**Substrate: 2220 psi Concrete**

| Anchor Dia. | Min. Edge Dist. | Min. Spacing | Min. Embedment | Allowable Tension (lbs) |
|---|---|---|---|---|
| 1/4" | 1.25" | 3.0" | 1.000" | 118 |
| | 2.50" | 1.5" | 1.000" | 195 |
| | 1.25" | 3.0" | 1.375" | 289 |
| | 2.50" | 1.5" | 1.375" | 343 |
| | 1.25" | 3.0" | 1.750" | 517 |
| | 2.50" | 1.5" | 1.750" | 465 |
| **Anchor Dia.** | **Min. Edge Dist.** | **Min. Spacing** | **Min. Embedment** | **Allowable Shear (lbs)** |
| 1/4" | 1.50" | 3.0" | 1.000" | 204 |
| | 3.00" | 1.5" | 1.000" | 259 |
| | 1.50" | 3.0" | 1.375" | 259 |
| | 3.00" | 1.5" | 1.375" | 413 |
| | 1.50" | 3.0" | 1.750" | 318 |
| | 3.00" | 1.5" | 1.750" | 488 |

**Substrate: 3275 PSI Concrete**

| Anchor Dia. | Min. Edge Dist. | Min. Spacing | Min. Embedment | Allowable Tension (lbs) |
|---|---|---|---|---|
| 1/4" | 1.25" | 3.0" | 1.000" | 248 |
| | 2.50" | 1.5" | 1.000" | 263 |
| | 1.25" | 3.0" | 1.375" | 389 |
| | 2.50" | 1.5" | 1.375" | 251 |
| | 1.25" | 3.0" | 1.750" | 295 |
| | 2.50" | 1.5" | 1.750" | 319 |
| **Anchor Dia.** | **Min. Edge Dist.** | **Min. Spacing** | **Min. Embedment** | **Allowable Shear (lbs)** |
| 1/4" | 1.50" | 3.0" | 1.000" | 255 |
| | 3.00" | 1.5" | 1.000" | 226 |
| | 1.50" | 3.0" | 1.375" | 319 |
| | 3.00" | 1.5" | 1.375" | 511 |
| | 1.50" | 3.0" | 1.750" | 306 |
| | 3.00" | 1.5" | 1.750" | 515 |

**Substrate: 1x4 (3/4" Thick) Treated No. 2 SYP attached to 2220 psi Concrete**

| Anchor Dia. | Min. Edge Dist. | Min. Spacing | Min. Embedment | Allowable Shear (lbs) |
|---|---|---|---|---|
| 1/4" | 2.50" | 3.0" | 1.5" | 200 |

**Substrate: 2x4 (1-1/2" Thick) Treated No. 2 SYP attached to 2220 psi Concrete**

| Anchor Dia. | Min. Edge Dist. | Min. Spacing | Min. Embedment | Allowable Shear (lbs) |
|---|---|---|---|---|
| 1/4" | 2.50" | 3.0" | 1.75" | 199 |

**Substrate: Concrete Masonry Hollow Block**

| Anchor Dia. | Min. Edge Dist. | Min. Spacing | Min. Embedment | Allowable Tension (lbs) |
|---|---|---|---|---|
| 1/4" | 2.00" | 3.0" | 1.250" | 195 |
| | 4.00" | 3.0" | 1.250" | 221 |
| **Anchor Dia.** | **Min. Edge Dist.** | **Min. Spacing** | **Min. Embedment** | **Allowable Shear (lbs)** |
| 1/4" | 2.00" | 3.0" | 1.250" | 234 |
| | 4.00" | 3.0" | 1.250" | 264 |

**Substrate: Grout-Filled Concrete Block**

| Anchor Dia. | Min. Edge Dist. | Min. Spacing | Min. Embedment | Allowable Tension (lbs) |
|---|---|---|---|---|
| 1/4" | 2.00" | 3.0" | 1.250" | 208 |
| | 4.00" | 1.5" | 1.250" | 186 |
| | 2.00" | 3.0" | 2.00" | 407 |
| | 4.00" | 1.5" | 2.00" | 504 |
| **Anchor Dia.** | **Min. Edge Dist.** | **Min. Spacing** | **Min. Embedment** | **Allowable Shear (lbs)** |
| 1/4" | 2.00" | 3.0" | 1.250" | 259 |
| | 4.00" | 1.5" | 1.250" | 352 |
| | 2.00" | 3.0" | 2.00" | 591 |
| | 4.00" | 1.5" | 2.00" | 597 |

**NOTES**

1. Edge distances denoted herein shall be measured from the center of the anchor to the edge of the substrate in the direction of, as well as perpendicular to, the direction of the load. Spacing between anchors denoted herein shall be measured center-to-center of anchors.
2. Allowable loads suggested herein are only valid when both the minimum anchor center-to-center spacing and the minimum edge distances are complied with.
3. Allowable loads suggested herein equal 25% of the average ultimate laboratory test values obtained during testing performed as part of the requirements to obtain this NOA. Final determination of the appropriate working/design loads to be used in a specific project are the sole responsibility of the engineer of record or of the architect of record specifying the use of the product.
4. No increase in allowable stress has been incorporated into the values provided in the tables contained herein.
5. Anchors approved under this product approval document have not been tested for use under combined loading.
6. The concrete substrate into which these anchors will be attached shall conform to ACI 301 specifications with strength properties as specified herein.
7. The hollow and grout-filled concrete block substrate into which these anchors will be attached shall be medium weight or normal weight concrete block conforming to ASTM C-90.
8. Combination wood and concrete substrate shall consist of 1 x 4 nominal (3/4" thick) treated No. 2 Southern Yellow Pine attached to concrete substrate conforming to ACI 301 specifications with strength properties as specified herein, or 2 x 4 nominal (1-1/2" thick) treated No. 2 Southern Yellow Pine attached to concrete substrate conforming to ACI 301 specifications with strength properties as specified herein.

**Due to a wide variety of application conditions or intervening factors not under our control, we assume no liability for the use of the information provided in this document. For additional product information and technical assistance, please contact Elco directly at 1-800-435-7213.**

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