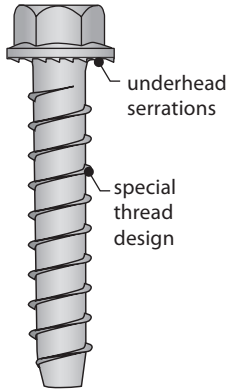


POWER Screw Bolt™



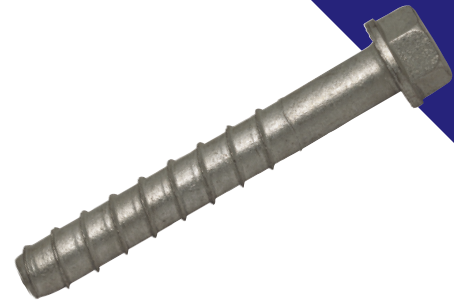
Threaded Anchors



Undercut threads and serrated head provide high performance

Key Features & Benefits

- One-piece screw bolt
 - No nuts and washers to assemble prior to installation
- Heat treatment provides surface and core hardness
- Electroplated zinc or heavy-duty, **mechanically galvanized** finish available
- Hardened, self-tapping threads feature a revolutionary undercutting design
 - Allows for immediate load application
 - Reduces required installation torque
- Easier and faster installation than mechanical expansion anchors
 - **Bolt Size is Hole Size®**
 - Prepare hole with lower-cost ANSI B212.15 standard bit – **no metric or off-size bits needed**
- Serrated head facilitates a positive lock between bolt and application surface for enhanced vibration resistance
- Lower spacing and edge distance requirements than mechanical expansion anchors
- Can be installed with an impact or socket wrench
- Removable – ideal for temporary anchoring applications
- Anchor length is stamped on head to ease identification pre- and post-installation



Specifications, Listings and Approvals

Diameters: 1/4" – 3/4"

Anchor Body: Heat treated carbon steel

Finish:

- 1/4" anchors have zinc electroplated to ASTM B633, Type III, SC1
- All other sizes are mechanically galvanized to ASTM B695, Class 65, Type 1

Head Style: Hex flange head with locking serrations

Tested in accordance with ASTM E488

Uses

- Applications with minimal edge distances
- Applications where a zinc anchor or galvanized anchoring is advised
- **Temporary outdoor** and some indoor dry-treated lumber applications

Order Information

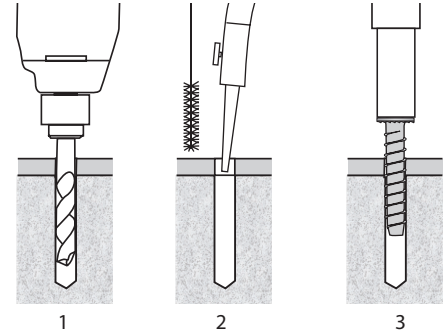
| Catalog No. | Plating Type | Head Style | Anchor Size (in.) | Bit Dia. (in.) | Baseplate Clearance Hole | Qty. Box/ Carton |
|-------------|--------------|------------|-------------------|----------------|--------------------------|------------------|
| ATEZ1413 | Zinc | Hex | 1/4 x 1-3/4 | 1/4 | 3/8 | 100/800 |
| ATEZ1421 | Zinc | Hex | 1/4 x 2-1/4 | 1/4 | 3/8 | 100/800 |
| ATEZ1430 | Zinc | Hex | 1/4 x 3 | 1/4 | 3/8 | 100/800 |
| ATEZG3830 | Mech Galv | Hex | 3/8 x 3 | 3/8 | 1/2 | 50/400 |
| ATEZG3840 | Mech Galv | Hex | 3/8 x 4 | 3/8 | 1/2 | 50/400 |
| ATEZG3850 | Mech Galv | Hex | 3/8 x 5 | 3/8 | 1/2 | 25/200 |
| ATEZG3860 | Mech Galv | Hex | 3/8 x 6 | 3/8 | 1/2 | 25/200 |
| ATEZG1230 | Mech Galv | Hex | 1/2 x 3 | 1/2 | 5/8 | 20/160 |
| ATEZG1240 | Mech Galv | Hex | 1/2 x 4 | 1/2 | 5/8 | 20/160 |
| ATEZG1250 | Mech Galv | Hex | 1/2 x 5 | 1/2 | 5/8 | 20/160 |
| ATEZG1260 | Mech Galv | Hex | 1/2 x 6 | 1/2 | 5/8 | 20/160 |

| Catalog No. | Plating Type | Head Style | Anchor Size (in.) | Bit Dia. (in.) | Baseplate Clearance Hole | Qty. Box/ Carton |
|-------------|--------------|------------|-------------------|----------------|--------------------------|------------------|
| ATEZG1270 | Mech Galv | Hex | 1/2 x 7 | 1/2 | 5/8 | 20/160 |
| ATEZG5840 | Mech Galv | Hex | 5/8 x 4 | 5/8 | 3/4 | 10/80 |
| ATEZG5850 | Mech Galv | Hex | 5/8 x 5 | 5/8 | 3/4 | 10/80 |
| ATEZG5860 | Mech Galv | Hex | 5/8 x 6 | 5/8 | 3/4 | 10/80 |
| ATEZG5870 | Mech Galv | Hex | 5/8 x 7 | 5/8 | 3/4 | 10/80 |
| ATEZG5880 | Mech Galv | Hex | 5/8 x 8 | 5/8 | 3/4 | 10/80 |
| ATEZG3440 | Mech Galv | Hex | 3/4 x 4 | 3/4 | 7/8 | 10/80 |
| ATEZG3450 | Mech Galv | Hex | 3/4 x 5 | 3/4 | 7/8 | 10/80 |
| ATEZG3460 | Mech Galv | Hex | 3/4 x 6 | 3/4 | 7/8 | 10/60 |
| ATEZG3470 | Mech Galv | Hex | 3/4 x 7 | 3/4 | 7/8 | 5/30 |

Installation in Concrete

1. Using the proper size carbide bit, drill a pilot hole at least one anchor diameter deeper than the desired anchor embedment.
2. Blow out concrete dust.
3. Using an electric impact wrench, or socket wrench, insert anchor into hole and tighten anchor until fully seated. If using an electric impact wrench, start on light torque setting to prevent over torturing or damaging threads.

NOTE: Always wear safety glasses.

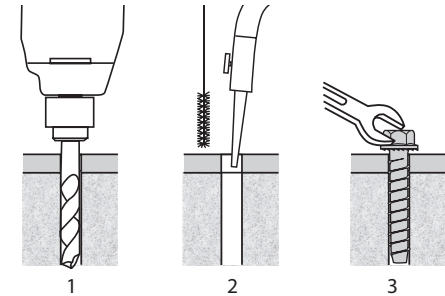


Installation in Concrete Block (CMU)

NOTE: Do not use an impact wrench for installation into CMU walls.

1. Using the proper size carbide bit, drill a pilot hole at least one anchor diameter deeper than the desired anchor embedment.
2. Blow out concrete dust.
3. Using a socket wrench insert anchor into hole and hand tighten anchor until fully seated.

NOTE: Always wear safety glasses.



*To assure full load values, do not ream the hole or allow the drill bit to wobble. Use solid carbide-tipped drill bits meeting ANSI B212.15 diameter standards.

Performance Data Installation Information

| | Units | Nominal Anchor Diameter | | | | | | | | | |
|----------------------------------|---------|-------------------------|-------|-------|---------|-------|-------|--------|--------|-------|-------|
| | | 1/4 " | | 3/8 " | | 1/2 " | | 5/8 " | | 3/4 " | |
| Drill Bit Diameter* | in. | 1/4 | | 3/8 | | 1/2 | | 5/8 | | 3/4 | |
| Minimum Baseplate Clearance Hole | in. | 3/8 | | 1/2 | | 5/8 | | 3/4 | | 7/8 | |
| Installation Torque Approx. | ft.-lb. | 8 | 8 | 25 | 25 | 55 | 55 | 95 | 95 | 150 | 150 |
| Socket Size | in. | 7/16 | 7/16 | 9/16 | 9/16 | 3/4 | 3/4 | 15/16 | 15/16 | 1-1/8 | 1-1/8 |
| Embedment Depth h_{nom} | in. | 1-3/16 | 2-1/2 | 2 | 3-1/2 | 2 | 3-1/2 | 2 | 3-1/2 | 2-1/2 | 4 |
| Effective Embed. Depth | in. | 3/4 | 2 | 1-1/4 | 2-11/16 | 1-1/4 | 2-3/4 | 3/4 | 2-1/2 | 1-5/8 | 3-1/8 |
| Minimum Hole Depth | in. | 1-11/16 | 3 | 2-1/2 | 4 | 2-1/2 | 4 | 2-1/2 | 4 | 3 | 4-1/2 |
| Critical Edge Distance | in. | 2 | 2 | 2-3/4 | 4-1/8 | 3-3/4 | 6 | 5 | 6-1/4 | 6-1/2 | 7-1/4 |
| Minimum Edge Distance | in. | 1-3/4 | 1-3/4 | 1-3/4 | 1-3/4 | 1-3/4 | 1-3/4 | 1-3/4 | 1-3/4 | 1-3/4 | 1-3/4 |
| Critical Spacing | in. | 3 | 3 | 6 | 6 | 8 | 8 | 10 | 10 | 12 | 12 |
| Minimum Spacing | in. | 1 | 1 | 1-1/2 | 1-1/2 | 2 | 2 | 2-1/2 | 2-1/2 | 3 | 3 |
| Head & Washer Height min. | in. | 1/4 | 1/4 | 3/8 | 3/8 | 31/64 | 31/64 | 19/32 | 19/32 | 45/64 | 45/64 |
| Washer Outer Dia., Approx. | in. | 1/2 | 1/2 | 3/4 | 3/4 | 1 | 1 | 1-5/32 | 1-5/32 | 1-3/8 | 1-3/8 |

* ANSI B212 .15 Solid Carbide Tipped Drill Bit

Performance Data – ASD

| | Units | Anchor Diameter | | | | | | | | | |
|---------------------|-------|-----------------|-------|------|-------|------|-------|-------|-------|-------|-------|
| | | 1/4" | | 3/8" | | 1/2" | | 5/8" | | 3/4" | |
| Embedment h_{nom} | in. | 1-3/16 | 2-1/2 | 2 | 3-1/2 | 2 | 3-1/2 | 2-1/2 | 3-1/2 | 2-1/2 | 5-3/4 |
| Ultimate Tension | lbf | 1025 | 3450 | 4248 | 11150 | 4758 | 12027 | 4689 | 13363 | 7042 | 27010 |
| Allowable Tension | lbf | 256 | 863 | 1062 | 2788 | 1190 | 3007 | 1172 | 3341 | 1761 | 6752 |
| Ultimate Shear | lbf | 2680 | 2680 | 8240 | 8240 | 9070 | 14670 | 12147 | 23660 | 14145 | 31734 |
| Allowable Shear | lbf | 670 | 670 | 2060 | 2060 | 2267 | 3667 | 3162 | 5915 | 3536 | 7933 |

Load Adjustment Factors – Spacing

| | | Units | Anchor Diameter | | | | | | | |
|-----------------------------|-----------|-------|-----------------|-------|------|-------|-------|-------|-------|------|
| | | | 3/8" | | 1/2" | | 5/8" | | 3/4" | |
| Embedment | h_{nom} | in. | 2 | 3-1/2 | 2 | 3-1/2 | 2 | 3-1/2 | 2-1/2 | 4 |
| Critical Spacing | S_{cr} | in. | 6 | 6 | 8 | 8 | 10 | 10 | 12 | 12 |
| Minimum Spacing | S_{min} | in. | 1-1/2 | 1-1/2 | 2 | 2 | 2-1/2 | 2-1/2 | 3 | 3 |
| Actual Spacing S_{act} | 1-1/2 | in. | 0.70 | 0.60 | | | | | | |
| | 2 | in. | 0.76 | 0.64 | 0.75 | 0.70 | | | | |
| | 2-1/2 | in. | 0.80 | 0.70 | 0.77 | 0.73 | 0.85 | 0.79 | | |
| | 3 | in. | 0.84 | 0.76 | 0.80 | 0.77 | 0.87 | 0.81 | | |
| | 3-1/4 | in. | 0.88 | 0.82 | 0.84 | 0.81 | 0.89 | 0.85 | 0.75 | 0.70 |
| | 4 | in. | 0.92 | 0.88 | 0.88 | 0.84 | 0.90 | 0.88 | 0.80 | 0.77 |
| | 5 | in. | 0.96 | 0.94 | 0.91 | 0.88 | 0.91 | 0.90 | 0.84 | 0.78 |
| | 6 | in. | 1.00 | 1.00 | 0.94 | 0.92 | 0.92 | 0.93 | 0.87 | 0.81 |
| | 7 | in. | | | 0.97 | 0.95 | 0.94 | 0.95 | 0.89 | 0.84 |
| | 8 | in. | | | 1.00 | 1.00 | 0.96 | 0.97 | 0.90 | 0.88 |
| | 9 | in. | | | | | 0.98 | 0.98 | 0.91 | 0.91 |
| | 10 | in. | | | | | 1.00 | 1.00 | 0.94 | 0.97 |
| 11 | in. | | | | | | | 0.97 | 0.97 | |
| 12 | in. | | | | | | | 1.00 | 1.00 | |

Notes: 4K psi concrete

Load Adjustment Factors – Edge

| | | Units | Anchor Diameter | | | | | | | |
|--------------------------|-----------|-------|-----------------|-------|-------|-------|-------|-------|-------|-------|
| | | | 3/8" | | 1/2" | | 5/8" | | 3/4" | |
| Embedment | h_{nom} | in. | 2 | 3-1/2 | 2 | 3-1/2 | 2 | 3-1/2 | 2-1/2 | 4 |
| Critical Edge | C_{cr} | in. | 2-3/4 | 4-1/8 | 3-3/4 | 6 | 5 | 6-1/4 | 6-1/2 | 7-1/4 |
| Minimum Edge | C_{min} | in. | 1-3/4 | 1-3/4 | 1-3/4 | 1-3/4 | 1-3/4 | 1-3/4 | 1-3/4 | 1-3/4 |
| Actual Edge C_{act} | 1-3/4 | in. | 0.79 | 0.77 | 0.62 | 0.64 | 0.70 | 0.60 | 0.75 | 0.60 |
| | 2 | in. | 0.88 | 0.82 | 0.72 | 0.68 | 0.76 | 0.66 | 0.77 | 0.62 |
| | 2-1/4 | in. | 0.92 | 0.84 | 0.76 | 0.70 | 0.78 | 0.68 | 0.78 | 0.63 |
| | 2-1/2 | in. | 0.96 | 0.86 | 0.80 | 0.72 | 0.80 | 0.70 | 0.79 | 0.64 |
| | 2-3/4 | in. | 1.00 | 0.88 | 0.84 | 0.74 | 0.83 | 0.72 | 0.80 | 0.65 |
| | 3 | in. | | 0.90 | 0.88 | 0.76 | 0.85 | 0.74 | 0.81 | 0.66 |
| | 3-1/4 | in. | | 0.92 | 0.92 | 0.78 | 0.86 | 0.76 | 0.82 | 0.67 |
| | 3-1/2 | in. | | 0.94 | 0.96 | 0.80 | 0.87 | 0.78 | 0.83 | 0.68 |
| | 3-3/4 | in. | | 0.96 | 1.00 | 0.82 | 0.88 | 0.80 | 0.84 | 0.69 |
| | 4 | in. | | 0.98 | | 0.84 | 0.90 | 0.82 | 0.85 | 0.70 |
| | 4-1/8 | in. | | 1.00 | | 0.86 | 0.94 | 0.84 | 0.86 | 0.71 |
| | 4-1/2 | in. | | | | 0.88 | 0.96 | 0.86 | 0.87 | 0.72 |
| | 4-3/4 | in. | | | | 0.90 | 0.98 | 0.88 | 0.88 | 0.73 |
| | 5 | in. | | | | 0.92 | 1.00 | 0.90 | 0.89 | 0.74 |
| | 5-1/4 | in. | | | | 0.94 | | 0.92 | 0.90 | 0.78 |
| | 5-1/2 | in. | | | | 0.96 | | 0.94 | 0.92 | 0.81 |
| | 5-3/4 | in. | | | | 0.98 | | 0.96 | 0.94 | 0.85 |
| | 6 | in. | | | | 1.00 | | 0.98 | 0.96 | 0.89 |
| | 6-1/4 | in. | | | | | | 1.00 | 0.98 | 0.94 |
| | 6-1/2 | in. | | | | | | | 1.00 | 0.95 |
| 6-3/4 | in. | | | | | | | | 0.97 | |
| 7 | in. | | | | | | | | 0.99 | |
| 7-1/4 | in. | | | | | | | | 1.00 | |

Notes: 4K psi concrete