



**ACQ-rated, 1,000-hour salt-spray tested exterior deck screws** engineered for pressure-treated lumber. This installation guide covers correct size selection, fastening patterns, driving technique, pre-drilling requirements, and troubleshooting for the full ToroTwist® range — #8 through #10 gauge in lengths from 1-5/8" to 3-1/2". T-25 star drive, Type 17 self-drilling point, nibbed countersink head, and reinforced shank — coarse thread with single-lead start — for decks, fences, railings, and all outdoor pressure-treated wood structures.

PRODUCT RANGE OVERVIEW

- KEY FEATURES

  - T-25 Star Drive — 6-point contact eliminates cam-out and bit stripping
  - Type 17 Self-Drilling Point — auger tip, no pre-drilling required in standard PT lumber
  - Nibbed Countersink Head — serrated nibs shear wood fibers for automatic flush seating
  - Reinforced Neck — thickened shank resists snap-off under heavy torque
  - ACQ Coating — 1,000-hr salt-spray tested (ASTM B117); exceeds ACQ/CA/MCA requirements
  - Coarse thread, single-lead start — TPI 9
  - Tan polymer coating — compatible with ACQ, CA, and MCA treated lumber chemistry
  - Free T-25 star drive bit included in every resealable bucket
- APPLICATIONS

  - Pressure-treated deck boards (ACQ, CA, MCA lumber)
  - Deck framing, rim joists, and blocking
  - Fence boards and fence rails
  - Outdoor railings and balustrades
  - Stair treads and stair stringers
  - Pergolas, arbors, and outdoor structures
  - Above-ground landscape structures
  - **Not for use with composite decking**

SIZE SELECTION GUIDE

General rule: screw length should penetrate the receiving member (joist/framing) a minimum of 1-1/2". For standard 5/4 deck boards, 2-1/2" or 3" is the most common choice. For 2x material, use 3" or 3-1/2".

| GAUGE | LENGTH | BOARD THICKNESS     | RECOMMENDED APPLICATION                                 |
|-------|--------|---------------------|---------------------------------------------------------|
| #8    | 1-5/8" | 5/4 boards (≤3/4")  | Light above-ground PT boards, thin treated fence boards |
| #8    | 2"     | 5/4 boards (~1")    | Standard 5/4 treated deck boards, fencing               |
| #9    | 2-1/2" | 5/4–2x4 material    | Treated 5/4 deck boards, railings, above-ground framing |
| #9    | 3"     | 2x4 to 2x6 material | 2x6 deck boards, joist blocking, stair treads           |
| #10   | 3-1/2" | 2x6–2x8 material    | Heavy deck boards, stair stringers, structural framing  |

- **Standard 5/4 deck boards (actual ~1"):** Use #8 2" or #9 2-1/2" — ensures minimum 1-1/2" penetration into joist
- **2x6 deck boards (actual 1-1/2"):** Use #9 3" or #10 3-1/2" — minimum 1-1/2" joist penetration
- **Fence boards (3/4"–1"):** Use #8 1-5/8" or #8 2" into rails
- **Stair treads (2x material):** Use #9 3" or #10 3-1/2" for solid hold
- **Joist blocking & rim joists:** #10 3-1/2" for maximum shear strength

TOOLS REQUIRED

- REQUIRED

  - Impact driver (recommended) or cordless drill with fresh battery
  - T-25 star drive bit — included free in every ToroTwist bucket
  - Additional impact-rated T-25 bits for large projects
  - Tape measure, pencil, chalk line for joist marking
- OPTIONAL / SITUATIONAL

  - Magnetic bit holder for one-handed driving
  - Drill bit set for pre-drilling near board ends
  - Countersink bit (not required for standard PT applications)
  - Autofeed screwgun for decks over 200 sq ft
  - Torque-adjustable clutch drill for consistent depth



## STEP-BY-STEP INSTALLATION

### 1 Install the T-25 Star Drive Bit

Use the included T-25 bit in your impact driver or drill. For large projects, have spare impact-rated T-25 bits on hand. A magnetic bit holder enables one-handed screw placement and speeds up installation.

### 2 Mark Your Joist Locations

Snap chalk lines across deck boards to mark each joist centerline. Accurate marking ensures screws hit joist centers and prevents squeaking from missed joists.

### 3 Position Screws at Correct Edge Distance

Place screws 3/4" to 1" from each board edge — never closer than 3/4". At board ends, maintain a minimum 1-1/2" end distance to prevent splitting. For boards 6" or wider, use 3 screws per joist to prevent cupping over time.

### 4 Drive at 90° — Steady Pressure

Hold the driver perpendicular (90°) to the board surface. Apply steady, firm pressure while driving to maintain bit engagement and prevent cam-out. The T-25 6-point contact virtually eliminates cam-out when using the correct bit.

### 5 Two-Stage Driving Technique

Drive fast to start the thread and seat the point, then slow down as the head approaches the surface. The ToroTwist nibbed countersink head automatically shears wood fibers — stop when the head seats flush. Do not continue driving after seating.

### 6 Verify Flush Seating — Do Not Overdrive

The serrated nibs on the ToroTwist head countersink automatically. The screw head should be flush to 1/16" below the wood surface. Overdriving weakens the connection and can cause the wood fibers to crush around the head.

### 7 Pre-Drilling Near Board Ends (When Required)

The Type 17 self-drilling point eliminates pre-drilling in the field of standard PT lumber. However, pre-drill within 1-1/2" of board ends to prevent splitting in dry or dense treated material. Use a bit at approximately 75% of screw diameter.

### 8 Reseal the Bucket After Each Use

The heavy-duty resealable plastic bucket protects the ACQ-rated tan coating from moisture and UV degradation between uses. Always close the lid securely after accessing screws.

## FASTENING PATTERNS & SPACING

### STANDARD DECK BOARDS

- 2 screws per board per joist — positioned 3/4"–1" from each edge
- Boards 6" or wider: use 3 screws per joist to prevent cupping
- Board ends must fall on joist center — 2 screws per board end
- Stagger end joints: do not align board ends in adjacent rows
- First/last boards against house or fascia: toe-screw if face access is limited
- Minimum 1-1/2" screw penetration into joist required by code

### FRAMING & STRUCTURAL

- Rim joist blocking: 3 screws per connection minimum
- Stair stringer attachment: #10 3-1/2" at 12" o.c.
- Fence boards to rails: 2 screws per rail, centered on board
- Railing posts: 4–6 structural screws per post base
- Joist spacing 16" o.c. (typical) — verify local code
- Always add 10–15% overage to screw quantity estimates

*Screw Quantity Estimator — Standard method: (Deck width in ft ÷ Board width in ft) × (Deck length in ft ÷ Joist spacing in ft) × 2. Example: 12×16 deck, 16" joists, 5.5" boards ≈ 330 screws + 10% waste = ~365 screws. ToroTwist 1,750-ct #8 or 1,500-ct #9 buckets cover most standard residential deck projects.*



## PRE-DRILLING REQUIREMENTS

### WHEN TO PRE-DRILL WITH TOROTWIST

- Within 1-1/2" of board ends — prevents end splitting in PT lumber
- Within 1" of board edges in dense or dry treated material
- Cold-weather installation (below 40°F) — lumber more brittle
- Old or reclaimed treated lumber that has fully dried out

### WHEN PRE-DRILLING IS NOT REQUIRED

- Field of standard fresh pressure-treated lumber (ACQ/CA/MCA)
- Middle of board, well away from ends and edges
- Type 17 auger point self-starts and self-drills in standard PT
- No pilot hole needed for fence boards in the field of the board

*Pilot hole diameter: Use a bit at approximately 75% of the screw shank diameter. Pilot hole depth should be slightly shorter than screw length to maintain thread bite in the receiving member. Do not use a clearance hole in the top board for standard PT applications — the coarse single-lead thread pulls boards tight to the joist.*

## ACQ / CA / MCA COMPATIBILITY & CORROSION GUIDANCE

### TOROTWIST IS RATED FOR

- ACQ (Alkaline Copper Quaternary) treated lumber — all grades
- CA (Copper Azole) treated lumber — Type A and B
- MCA (Micronized Copper Azole) treated lumber
- Above-ground and ground-contact PT applications — verify lumber is rated for intended use per local code
- 1,000-hour salt-spray tested per ASTM B117

### DO NOT USE TOROTWIST WITH

- Composite decking boards (use composite-specific screws)
- Exotic hardwoods — including Ipe, Tigerwood, and Cumaru
- Marine or submerged applications
- Within 3 miles of saltwater coast — use 316 stainless steel instead

*Never mix plain steel or standard zinc-plated screws with ACQ/CA/MCA treated lumber — do not substitute ToroTwist with unrated fasteners. The copper compounds in modern pressure treatments accelerate galvanic corrosion on unrated fasteners, causing premature failure. ToroTwist ACQ-rated polymer coating is specifically engineered to resist this reaction.*

## CORRECT SCREW DEPTH & SEATING

### TARGET DEPTH

- Pressure-treated lumber: head flush to 1/16" below surface
- Fence and railing boards: flush — do not countersink excessively
- Stair treads (2x material): flush — preserves tread strength
- Never leave screw heads proud — tripping hazard and moisture trap

### SIGNS OF INCORRECT DEPTH

- Head proud of surface: insufficient driving, bit slippage, or wrong bit
- Head sunk >1/16": overdriven — weakens connection, damages fibers
- Crushed wood fibers around head: torque too high or wrong screw type
- Mushrooming: not applicable to PT wood — indicates wrong screw for material

*The ToroTwist nibbed countersink head is engineered to stop at flush automatically — trust the geometry. Practice on a scrap piece to calibrate your driver clutch setting before starting the deck field.*

## TROUBLESHOOTING — COMMON PROBLEMS & SOLUTIONS

| PROBLEM                         | CAUSE                                                                                            | SOLUTION                                                                                                                                                        |
|---------------------------------|--------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Splitting Near Ends</b>      | Screws too close to end or edge; no pilot hole; cold weather driving; dry/brittle PT             | Maintain 1-1/2" end distance; pre-drill within 1-1/2" of ends; install above 40°F; Type 17 point reduces splitting but does not eliminate need for end distance |
| <b>Cam-Out / Stripped Drive</b> | Wrong bit size; worn bit; insufficient pressure; driving at an angle                             | Use T-25 specifically (not T-20 or T-27); replace worn bits frequently; apply firm steady pressure; keep driver at 90° to board surface                         |
| <b>Screw Snap-Off</b>           | Excessive torque; driving into a dense knot; stripped drive recess causing cam-out and side load | Reduce driver speed/torque; avoid knots — reposition screw slightly; ToroTwist reinforced neck resists snap-off in standard PT applications                     |
| <b>Head Not Seating Flush</b>   | Bit slipping before full drive; dirty or wet lumber surface; wrong screw length                  | Use fresh T-25 bit; clear debris from board surface; verify screw length is appropriate for board thickness; apply consistent downward pressure                 |



|                         |                                                                                       |                                                                                                                                                                                                |
|-------------------------|---------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Squeaking After Install | Insufficient screw penetration into joist; missed joist; loose board-to-joist contact | Minimum 1-1/2" penetration into joist required; mark joists accurately with chalk line; add additional screw if penetration is marginal; use 3" or 3-1/2" screws for 2x boards                 |
| Corrosion / Staining    | Wrong screw type with treated lumber; coastal environment; ground-water contact       | Verify lumber treatment type — ToroTwist is ACQ/CA/MCA rated; for coastal (within 3 miles of salt water) use 316 stainless; never substitute zinc-plated screws in treated lumber applications |

CERTIFICATIONS & COMPLIANCE

|                      |            |                  |                  |
|----------------------|------------|------------------|------------------|
| ISO 9001 / ISO 14001 | ASTM C1002 | ASTM B117 TESTED | ACQ/CA/MCA RATED |
|----------------------|------------|------------------|------------------|

Manufactured in an ISO 9001 and ISO 14001 certified factory. Made to conform to ASTM C1002. Meets or exceeds ACQ/CA/MCA corrosion requirements per ASTM B117 (1,000-hour salt spray). Always comply with local building codes, lumber manufacturer requirements, and applicable deck construction standards.

SKU LIST & ORDERING INFORMATION

| PART NUMBER         | GAUGE | LENGTH | HEAD DIAMETER | QTY/PKG  | FSI ITEM # | UPC          |
|---------------------|-------|--------|---------------|----------|------------|--------------|
| TORO ACQSTAR158-BKT | #8    | 1-5/8" | 7.4 – 8.4 mm  | 1,750 ct | 7256881    | 873281203909 |
| TORO ACQSTAR200-BKT | #8    | 2"     | 7.4 – 8.4 mm  | 1,750 ct | 7256882    | 873281203916 |
| TORO ACQSTAR212-BKT | #9    | 2-1/2" | 8.0 – 9.1 mm  | 1,500 ct | 7256883    | 873281203923 |
| TORO ACQSTAR300-BKT | #9    | 3"     | 8.0 – 9.1 mm  | 1,500 ct | 7256884    | 873281203930 |
| TORO ACQSTAR312-BKT | #10   | 3-1/2" | 8.6 – 9.8 mm  | 1,350 ct | 7256885    | 873281203947 |

All sizes available in heavy-duty resealable plastic buckets. Free T-25 star drive bit included in every bucket. Color: Tan. Contact your distributor or visit [torotwist.com](https://torotwist.com) for current pricing and availability.

STORAGE & HANDLING

STORAGE BEST PRACTICES

- Always reseal the heavy-duty bucket after each use
- Store in a dry, covered location away from direct weather exposure
- Avoid storing open buckets in high-humidity environments
- Do not store in direct contact with wet or freshly treated lumber
- Protect coating from abrasion — do not mix with other fastener types

HANDLING NOTES

- ACQ-rated coating is durable but can be abraded by rough handling
- Inspect screws before use — discard any with damaged or missing coating
- Do not use screws that show rust staining — coating may be compromised
- FIFO stock rotation recommended for job-site buckets
- Keep lids closed on unused buckets to prevent UV and moisture degradation

ToroTwist® is a registered trademark of Fastening Solutions, Inc. Information is believed accurate but is provided without warranty. FSI reserves the right to change specifications without notice. Always comply with local building codes and lumber manufacturer requirements. This guide covers the ToroTwist ACQ-rated exterior deck screw range only — #8 through #10 gauge, 1-5/8" through 3-1/2" lengths. Not for use with composite decking or exotic hardwoods.